

SUBSTANCE USE AND BULLYING INTERVENTION AMONG HIGH SCHOOL
STUDENTS

by

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DEDICATION

This work is dedicated with love and gratitude to two women who have permanently shaped my life path. My two grandmothers, Leola Doyen and Mildred Watts, are no longer physically here but I feel them with me regularly. Grandma Doyen supported my undergraduate and graduate education unconditionally, the same way she loved all of us, evidence of her devotion to what matters most in life. On the other side of my family, Grandma Watts used to confidently proclaim that I would become the first “Dr. Watts” in the family; I dismissed her comments at the time, but now I realize that she was right all along, and believed in me long before I even considered this possibility. The fact is, I would not have had the opportunity and privilege to continue my education to this level without the love from and legacy of my remarkable grandmothers.

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ABSTRACT

Comprised of three individual articles, this article-based dissertation investigates the relationship between bullying and substance use among high school students. Chapter One provides an overview of the dissertation's purpose along with a discussion of the theoretical framework and development of the studies comprising the dissertation. Chapter Two examines the relationship between bullying victimization and substance use among high school students. Findings demonstrate that students who reported bullying victimization reported higher levels of alcohol and illicit drug use, but not marijuana use. Chapter Three is a mixed methods study assessing the appropriateness of an "aged-up" brief bullying bystander intervention (STAC) and exploring the lived experiences of high school students trained in the program. Quantitative results include an increase in knowledge and confidence to intervene in bullying situations, awareness of bullying, and use of the STAC strategies. Qualitative results support quantitative findings. These findings led to the final study, Chapter Four, which examines the efficacy of a brief, bystander bullying intervention (STAC) on reducing alcohol use among high school students. At 30-day follow-up, high-risk drinkers in the intervention group reported greater reductions in alcohol use compared to those in the control group.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
CBT	Cognitive Behavioral Therapy
CDCP	Centers for Disease Control and Prevention
CQR	Consensual Qualitative Research
DBT	Dialectical Behavioral Therapy
DDQ	Daily Drinking Questionnaire
DMQ-R	Drinking Motives Questionnaire Revised
GLM	General Linear Model
QFP	Quantity/Frequency/Peak Questionnaire
RCT	Randomized Controlled Trial
SAMHSA	Substance Abuse and Mental Health Service Administration
SAPPS	Student-Advocates Pre- and Post-Scale
SBIRT	Screening, Brief Intervention, and Referral to Treatment
SeMS	Social and Emotional Maladjustment Scale
STAC	An acronym for “Stealing the Show,” “Turning it Over,” “Accompanying Others,” and “Coaching Compassion”
SUSCS	Substance Use and School Climate Survey

CHAPTER ONE

1.1 Introduction

This dissertation includes three articles that are a continuum of work. While each article stands alone, there is commonality that links all three articles. Specifically, the chapters in this dissertation are connected by the themes of bullying and substance use. Each of the chapters builds upon the preceding chapter's findings to encompass a more in-depth analysis of how a brief, bullying bystander intervention (STAC) affects alcohol use among high school students. Chapters Two, Three, and Four include articles written for publication in counseling journals. Each chapter contains detailed introductions to the article, including abstracts that provide context for each article. The remainder of this chapter lays the foundation for the justification of and motivation behind the following chapters' articles, as well as this dissertation as a whole.

Chapter Two, Gender Differences in the Relationship between Bullying Victimization and Substance Use among High School Students, calls attention to and introduces the relationship between bullying and substance use among high school students ($N = 580$). Specifically, this study examined gender differences in this relationship among targets of bullying. Results indicated students who reported bullying victimization reported higher levels of alcohol and illicit drug use, but not marijuana use. Further, the relationship between bullying victimization and illicit drug use was moderated by gender, such that males who reported bullying victimization reported the highest levels of illicit drug use.

Chapter Three contains an article titled A Mixed Methods Evaluation of the “Aged-Up” STAC Bullying Bystander Intervention for High School Students. This mixed methods study assessed the appropriateness of an “aged-up” brief bullying bystander intervention (STAC) and explored the lived experiences of high school students trained in the program. The purpose of this article was to evaluate the “aged-up” STAC intervention which was adapted to be developmentally appropriate specifically for the high school student population. Quantitative results included an increase in students’ knowledge and confidence to intervene in bullying situations, awareness of bullying, and use of the STAC strategies. Qualitative findings supported quantitative findings and included students reporting feelings of empowerment in bullying situations and increases in awareness of bullying situations. Implications suggest that the “aged-up” intervention is a developmentally appropriate way to equip high school students with strategies to intervene in bullying situations when they witness bullying as bystanders. This study supports the use of STAC in the high school population, which provided an age-appropriate bullying bystander intervention for Chapter Four’s study.

Finally, Chapter Four contains a manuscript titled The Efficacy of a Brief, Bystander Bullying Intervention on Alcohol Use Among High School Students. This study built upon the studies in Chapter Two and Three by examining the efficacy of a brief, bystander bullying intervention on reducing alcohol use among high school students. The purpose of this study was to evaluate the “aged-up” STAC intervention on reducing alcohol among high school students who witness bullying as bystanders. At 30-day follow-up, students in the intervention group reported greater reductions in alcohol use compared to those in the control group. Further, intervention effects were moderated

by drinker risk-status such that effects sizes were larger for students classified as high-risk drinkers (i.e., reporting heavy episodic drinking in the past 30 days). This study provided preliminary data supporting the use of STAC in the high school setting, not only to equip bystanders with strategies to intervene, but also to reduce alcohol use among high school students. Chapter Four provides the foundation for continued and expanded evaluation of the STAC intervention, including the process by which the intervention may reduce alcohol use among students who witness bullying as bystanders.

1.2 A Humanistic Perspective on Bullying and Substance Abuse

This dissertation has been approached with a humanistic lens. Humanistic principles shed light on the findings contained in the individual articles that comprise this dissertation. A fundamental concept in humanistic theory is that of self-actualization, a term referring to the innate desire of humans to strive towards fulfillment of potential (Maslow, 1943). Humanistic theory is also relationship-focused, recognizing that supportive relationships allow individuals to reach their full potential (Scholl, McGowan, & Hansen, 2013). Inherent in positive relationships is empathy, or the ability to feel what another is feeling (Rogers, 1951). A sense of safety and affiliation is essential to enable self-actualization (Maslow, 1968) but safety and relationships are threatened when bullying occurs (Carney, Jacob, & Hazler, 2011). From a humanistic perspective, bullying—especially witnessing bullying and not intervening to help peers—results in a lack of support and safety. An incongruent climate is counterproductive for the self-actualization process (Rogers, 1959). Incongruence and a lack of supportive relationships may drive adolescents to cope in unhealthy ways such as using substances like alcohol.

A primary role of counselors is to be invested in nurturing the self-actualizing tendency and positive relationships of their students and adolescent clients (Villares, Lemberger, Brigman, & Webb, 2001). Therefore, a humanistic approach to both bullying and substance use intervention programs seems advantageous. All of the strategies taught in the STAC bullying intervention are relational and encourage positive interactions between students in a humanistic way. For example, in the “coaching compassion” strategy, students are taught how to foster empathy for the target of bullying which emphasizes both the humanistic ideas of relationships and empathy (Midgett, Doumas, Sears, Lundquist, & Hausheer, 2015). In addition, the STAC program has been successfully evaluated through a humanistic lens and researchers found that participants utilized the STAC strategies as a way to congruently express themselves and they experienced an enhanced sense of self as a result of being trained (Midgett, Moody, Reilley, & Lyter, 2017). Further, the findings in this dissertation demonstrate that high school students feel empowered and confident when provided with tools to appropriately intervene in bullying situations. Finally, results suggest that participation in the STAC program is associated with a reduction in alcohol use. When considered within the framework of humanistic theory, the STAC program provides students with healthy tools to self-actualize, reducing their need for alcohol to cope with the experience of witnessing bullying.

1.3 Bullying and Substance Use Among High School Students

Bullying and substance use are prevalent problems in high school that are associated with multiple socio-emotional consequences. Although bullying and substance use can occur independently, researchers have identified a relationship between substance

use and both bullying victimization (Litwiler & Brausch, 2013; Luk, Wang, & Simons-Morton, 2010) and witnessing bullying (Doulas, Midgett, & Johnston, 2017; Rivers, Poteat, Noret, & Ashurst, 2009). High school students may use substances to cope with the negative impact of being a target of bullying or witnessing others being bullied (Doulas et al., 2017; Topper, Casellanos-Ryab, Mackie, & Conrad, 2011). The purpose of this body of work is to add to the literature on the relationship between bullying and substance use and to test the efficacy of a brief, bullying bystander intervention on reducing alcohol use among high school students.

1.3.1 Prevalence and Consequences of Bullying Victimization

Bullying is defined as often repeated, unwanted, intentional aggressive behavior that takes place within the context of a relationship with a perceived power imbalance (Brank, Hoetger, & Hazen, 2012). Although bullying peaks in middle school, bullying continues to be a prevalent issue at the high school level (U.S. Department of Education, 2015). National statistics indicate approximately 20.5% of high school students are targets of bullying at school and 15.8% are targets of cyberbullying (Centers for Disease Control and Prevention, 2016). Additionally, cyberbullying peaks among high school seniors (18.7%; U.S. Department of Education, 2016).

There are extensive negative consequences associated with being a target of bullying in adolescence (Moore et al., 2017). Bullying victimization is associated with a wide range of mental health risks (e.g., internalizing problems, interpersonal sensitivity, hostility), as well as nonclinical concerns (e.g., schoolwork, body image, friendships, problems at home) for adolescents (Rivers et al., 2009). Among high school students, bullying victimization is associated with higher levels of risky health behaviors, including

less physical activity, less sleep, more risky sexual practices (Hertz et al., 2015). Bullying victimization is also associated with increased levels of depression and suicidal ideation (Bauman et al., 2013; Smalley et al., 2017).

1.3.2 Prevalence and Consequences of Adolescent Substance Use

Substance use is another significant problem among high school students in the United States. National survey results show that 61.5% of high school students report having used alcohol by their senior year and 45.3% report being drunk at least once in their lifetime (Johnston, Miech, et al., 2018). Additionally, 16.6% of high school seniors report binge drinking at least once in the past two weeks (Johnston, Miech, et al., 2018). Further, national survey data show indicate that 44.7% of students report using marijuana and 21.1% report using illicit drugs by their senior year (Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2016).

Researchers have found that adolescent substance use has numerous negative consequences. For example, adolescent alcohol use is associated with negative interpersonal interactions, dating violence victimization, suicide attempts, and academic problems (Arata, Stafford, & Tims, 2003; Miller, Naimi, Brewer, & Jones, 2007). Further, heavy episodic drinking or binge drinking is associated with risky health behaviors such as increased use of other substances, risky sexual behavior, and suicide attempts (Miller, Naimi, Brewer, & Jones, 2007), as well as decreased neuropsychological functioning (Nguyen-Louie et al., 2015). Similarly, marijuana use is associated with a decreased attention span, difficulty learning and processing, and reduced sleep quality in adolescents (Jacobus, Bava, Cohen-Zion, Mahmood, & Tapert, 2009). In addition, research has shown that illicit drug use predicts conduct problems and

an increased likelihood of dropping out of school in adolescence (Briere, Fallu, Morizot, & Janosz, 2014).

1.3.3 The Relationship Between Bullying Victimization and Substance Use

Adding to the complexity of the literature demonstrating negative consequences of bullying victimization and of substance use, findings from a recent meta-analysis revealed significant associations between bullying victimization and alcohol, tobacco, and illicit drugs among adolescents (Moore et al., 2017). In contrast, the meta-analysis revealed no significant relationship between marijuana and bullying (Moore et al., 2017) although some research has shown a positive association (Dumas et al., 2017). Another factor to consider is that most studies have samples that combine high school students with middle school students (Radliff et al., 2012; Topper et al., 2011) as opposed to limiting studies to a high school specific sample (Litwiller & Brausch, 2013; Luk et al., 2010) or examining differences between high school and middle school students (Dumas et al., 2017). Although bullying peaks in middle school, it continues into high school (U.S. Department of Education, 2015). Additionally, relative to middle school students, substance use is higher among high school students and continues to rise until senior year (Johnston et al., 2016). For these reasons, it is important to evaluate the association between bullying victimization and substance use specifically among high school students.

Another important component in this association is gender. National data indicates that female students report more bullying than male students (U.S. Department of Education, 2015) but, in contrast, substance use is higher among males than females (Johnston et al., 2016). There is, however, limited research evaluating gender differences

within the relationship between substance use and bullying. One longitudinal study found that relative to non-victims, childhood bullying victimization was associated with faster increases in cigarette use over time for males and females, but faster increases in marijuana use for males only (Connolly, 2017). There is, however, a dearth of research evaluating the relationship between bullying victimization and substance use specifically for high school students. One study found that victimization was positively associated with substance use in both males and females but that this relationship was mediated by depression in females only (Luk et al, 2010). Findings suggest that the process by which victimization and substance use are related may vary by gender. Thus, further evaluation of gender differences in the relationship between bullying victimization and substance use is warranted. Chapter Two extends the literature by evaluating gender differences in the relationship between bullying victimization and substance use specifically among a sample of high school students.

1.4 Students who Witness Bullying as Bystanders

The effects of bullying extend beyond targets of bullying to students who witness bullying, with as many as 70.6% of students report witnessing bullying as bystanders (Bradshaw, Sawyer, & O'Brennan, 2007). Research indicates witnessing bullying is associated with elevated mental health risks for high school students (Rivers et al., 2009). In addition, students who witness bullying present symptoms of helplessness and higher levels of suicidal ideation than students who are not involved in bullying situations (Rivers & Noret, 2013).

1.4.1 Bystander Roles

Bystanders adopt various roles when witnessing bullying (i.e. “assistant,” “reinforcer,” “outsider,” and “defender” (Salmivalli, Lagerspet, Björkqvist, Österman, & Kaukiainen, 1996). “Assistants” and “reinforcers” actively support bullying by joining in or providing positive feedback to the student(s) who bully. “Outsiders” either leave the situation or observe passively. “Defenders” actively intervene on behalf of the target of bullying. The majority of students, however, do not intervene to support the target, with researchers estimating 20% to 30% of students act as “assistants” and “reinforcers,” 30% to 50% act as “outsiders,” and only 20% to 30% act as “defenders” (O’Connell, Pepler, & Craig, 1999).

Although bystanders are frequently successful when they intervene on behalf of targets of bullying (Gage et al., 2014), students often do not know what to do and do nothing (Forsberg, Thronberg, & Samuelsson, 2014; Hutchinson, 2012). Witnessing bullying but not intervening leads to feelings of guilt (Hutchinson, 2012) and coping through moral disengagement (Forsberg et al., 2014). Additionally, some studies show that students who do intervene as “defenders” report higher level of depression than students who do not intervene (Lambe, Hudson, Craig, & Pepler, 2017; Wu, Luu, & Luh, 2016). Students may not have the skills to intervene appropriately and may use maladaptive “defending” behaviors, leading to psychological distress (Lambe et al., 2017). These findings highlight the importance of teaching students how to intervene effectively. Moreover, a recent meta-analysis found that students who defend have higher levels of empathy, perceived relational support, altruism, social skills, and friendliness who do not intervene in bullying situations (Lambe et al., 2018).

1.4.2 Using Alcohol to Cope with Witnessing Bullying

Witnessing bullying as a bystander is also associated with substance use among high school students (Rivers et al., 2009). In fact, some research indicates bystanders are at higher risk for substance abuse than students who are targets or perpetrators of bullying (Rivers et al., 2009). One theory for the widespread use of substances among adolescents is that adolescents may self-medicate with substances in order to cope with negative emotional states (e.g., Khantzian, 1990; Khantzian, 1997). National statistics from high school seniors support this theory indicating that among students who use substances, 37.8% report using substances to relax, 19.8% report using substances to escape from problems, and 15.4% report using substances to deal with anger (Terry-McElrath, O'Malley, & Johnston, 2009). Drinking to cope with emotions is associated with problematic alcohol use patterns beyond the adolescent years (Colder et al., 2002). In addition, adolescents who drink to cope are especially vulnerable to negative consequences as a result of their drinking, such as poor coping abilities and decreased life satisfaction (Wicki et al., 2017).

Research has demonstrated that drinking to cope with negative emotions mediates the relationship between bullying victimization and problems associated with risky drinking such that alcohol-related problems in targets of bullying can be explained by drinking to cope (Topper, Casellanos-Ryab, Mackie, & Conrad, 2011). It is also possible that bystanders may drink to cope with the negative emotions related to witnessing bullying. Thus, providing students with skills to act as “defenders” is an important step in reducing the negative emotions reported by bystanders, as well as reducing alcohol use that may be related to these experiences.

1.5 Bystander Intervention

Researchers have developed intervention programs to tackle the widespread issue of bullying. These interventions are often school-wide and comprehensive, including teachers and parents and sometimes requiring significant class time (Polanin, Espelage, & Pigott, 2012; Ttofi, Farrington, Lösel, & Loeber, 2011). However, these programs are most effective for students in middle and elementary school (Yeager, Fong, Lee, & Espelage, 2015) and very few include a bystander intervention component (Polanin et al., 2012). The programs that do include a bystander component have also been developed for children in classrooms (Salmivalli, 2010) rather than for high school students who have more independence at school, less adult supervision in the hallways and at lunch, and move to different classrooms throughout the day. Thus, there is a need for bystander interventions that are effective and developmentally appropriate for the high school level (Denny et al., 2015).

1.5.1 The STAC Intervention

The STAC intervention was originally developed for middle and elementary schools as a brief, cost-effective, stand-alone program (for details, see Midgett et al., 2015). The STAC intervention begins with a 90-minute training consisting of didactic and experiential components. Trainers provide education about bullying, including an emphasis on fostering empathy for both the targets and the perpetrators of bullying. Trainers share statistics on numerous negative consequences of being a target and reasons why students bully. Trainers also teach students the four STAC strategies students can use to intervene as “defenders.” The intervention also includes 15-minute follow up groups that occur twice during the month following the training. These group meetings

aim to reinforce students' use of the strategies and brainstorm ways to intervene more effectively. The STAC strategies are described below.

“Stealing the Show.” “Stealing the show” involves using humor or distraction to refocus attention away from the bullying. Bystanders are trained how to interrupt a bullying situation to displace other students' attention so that other students do not join in or reinforce bullying.

“Turning it Over.” “Turning it over” involves informing a trusted adult about the situation and asking for assistance or guidance. In cases of overt physical bullying, cyberbullying, or if students are not sure what to do, students are encouraged to “turn it over” to ensure safety. Trainers discuss the importance of documenting cyberbullying and how to report it to appropriate authorities.

“Accompanying Others.” “Accompanying others” involves the bystander reaching out to the targeted student to express that what happened is unacceptable, that the target is not alone, and that the student bystander cares. Trainers teach students to approach a peer after they were targeted to invite them to spend time together or to talk about the bullying situation.

“Coaching Compassion.” “Coaching compassion” involves the bystander using gentle confrontation with the perpetrator(s) of bullying during or after the bullying incident. “Defenders” express that bullying not acceptable and bystanders encourage the perpetrator to have empathy for the target.

Research indicates the STAC intervention is effective in increasing knowledge of bullying, knowledge of the STAC strategies, and confidence to intervene in bullying situations (Midgett et al., 2015; Midgett & Dumas, 2016; Midgett, Dumas, & Trull,

2017). Additionally, students trained in the STAC intervention report using the STAC strategies post-training (Midgett et al., 2018). As a result of the STAC program, students have also reported decreases in anxiety (Midgett, Dumas, Trull, & Johnston, 2017) and increases in self-esteem (Midgett, Dumas, & Trull, 2017). Notably, prior research has also shown that student reported incidents of bullying victimization and perpetration have decreased after participation in the STAC intervention (Midgett, Dumas, Trull, & Johnson, 2017). Additionally, qualitative research has demonstrated that students trained in the STAC program felt that the strategies enabled them to defend in a congruent manner (Midgett, Moody, et al., 2017). Students also experienced a positive sense of self as a result of using the STAC strategies and were able to incorporate their own personal values into their defending behavior, enhancing feelings of congruence (Midgett, Moody, et al., 2017). These findings relating to congruence, positive sense of self, and personal values are all humanistic concepts which help to understand the way STAC works.

Because the STAC intervention was originally developed for elementary and middle school students, initial research was conducted to determine how the program needed to be “aged-up” to be developmentally appropriate for high school students (Midgett, Dumas, Johnston, et al., 2017). Results from this qualitative study indicated the need to address the complexity of high school bullying including group dynamics, the need to focus more on cyberbullying in particular, and the importance of age-appropriate examples during the training (Midgett, Dumas, Johnston, et al., 2017). These findings guided the development of a high-school STAC program. Chapter Three presents a mixed methods study which evaluated an “aged-up” brief, bystander intervention program adapted to meet the developmental needs of high school students.

1.5.2 The Impact of the “Aged-Up” STAC Intervention on Consequences for Students who Witness Bullying

One of the most consistently demonstrated psychological consequences of witnessing bullying is the experience of depressive symptoms including guilt and sadness (Hutchinson, 2012), helplessness, and suicidal ideation (Rivers & Noret, 2013). Prior studies have demonstrated reduced depression among high school students trained in the “aged-up” STAC intervention (Dumas, Midgett, & Watts, in press; Midgett & Dumas, in press). Further, consistent with the humanistic perspective that a positive sense of school belonging is crucial for healthy development (Maslow, 1968), Midgett & Dumas (in press) found that sense of school belonging mediated the relationship between the STAC intervention and reductions in depressive symptoms (Midgett & Dumas, in press).

Although there is a dearth of research looking specifically at the association between witnessing bullying and substance use, preliminary research demonstrates a positive association (Rivers et al., 2009). Because alcohol use peaks in high school and is associated with witnessing bullying, training bystanders to intervene when witnessing bullying might be effective in reducing rates of alcohol use among high school students. The purpose of the study in Chapter Four is to examine the efficacy of the “aged-up” STAC intervention on reducing alcohol use among high school students. Chapter Four extends the work presented in Chapter Two and Chapter Three by addressing the relationship between witnessing bullying and alcohol use through the implementation of the “aged-up” STAC program for high school students.

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CHAPTER TWO: GENDER DIFFERENCES IN THE RELATIONSHIP BETWEEN
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Gender Differences in the Relationship between Bullying Victimization and Substance
Use among High School Students

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Abstract

This study examined gender differences in the relationship between bullying victimization and substance use among high school students ($N = 580$). Students who reported bullying victimization reported higher levels of alcohol and illicit drug use, but not marijuana use. Further, the relationship between bully victimization and illicit drug use was moderated by gender such that males who reported bully victimization reported the highest levels of illicit drug use.

Keywords: Bullying, victimization, substance use, gender differences

2.1 Introduction

Bullying is a significant problem that occurs during adolescence, with national data indicating approximately 25% of students reporting being bullied at school (U.S. Department of Education, 2015c). Researchers have defined bullying as often repeated, unwanted, intentional aggressive behavior that takes place within the context of a relationship with a perceived power imbalance (Brank, Hoetger, & Hazen, 2012; Olweus, 1993). Bullying can take place on school campuses through in-person interactions or on-line through cyberbullying where students utilize electronic or digital media to intentionally humiliate another student (U.S. Department of Health & Human Services, 2016).

Bullying is associated with many negative consequences for those who are victimized, including higher rates of depression, anxiety (Copeland, Wolke, Angold, & Costello, 2013), suicidal ideation, suicide attempts (Holt et al., 2015), and lower levels of academic achievement (Juvonen, Wang, & Espinoza, 2011; Nakamoto & Schwartz, 2010; Rueger & Jenkins, 2014) relative to non-victims. Research specific to high school

students indicates victims of bullying report risky health behaviors including being physically inactive, getting less sleep, and engaging in risky sexual behaviors, as well as increased injuries due to physical fights, dating violence victimization, and carrying a weapon to school (Hertz et al., 2015). Further, students who report being bullied are at risk for depression and suicidal ideation (Bauman, Toomey, & Walker, 2013; Hertz et al., 2015), suicidal attempts later in life (Klomek et al., 2011), and lower school performance and school attachment (Schneider et al., 2012).

Substance use is another significant problem facing adolescents. According to national survey data, 64.0% of students report using alcohol, 44.7% report using marijuana, and 21.1% report using illicit drugs by their senior year (Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2016b). Similar to bullying, adolescent substance use is associated with multiple negative consequences including negative interpersonal interactions, being a victim of dating violence, attempting suicide, and poor school performance (Arata, Stafford, & Tims, 2003; Miller, Naimi, Brewer, & Jones, 2007). Adolescent alcohol use is also associated with impaired neuropsychological functioning, including deficits in verbal memory, visuospatial ability, and psychomotor speed (Hanson, Medina, Padula, Tapert, & Brown, 2011; Nguyen-Louie et al., 2015). Research also indicates that risky patterns of drinking established in high school (i.e., prepartying and playing drinking games) are predictive of both heavy drinking and alcohol-related consequences in college (Kenney et al., 2010). Further, alcohol use in high school is predictive of heavy episodic drinking in both college and non-college attending young adults (White, McMorris, Catalano, Fleming, Haggerty, & Abbott, 2006) and is also predictive of substance use in adulthood (Stone, Becker, Huber, & Catalano, 2012).

One explanation for substance use in adolescence is that adolescents may use substances to cope with negative emotional states through self-medication (e.g., Khantzian, 1990; Khantzian, 1997). Consistent with this model, national survey data indicate that among high school seniors who use substances, 37.8% report using substances to relax, 19.8% report using substances to escape from problems, and 15.4% report using substances to deal with anger (Terry-McElrath, O'Malley, & Johnston, 2009). Drinking to cope with emotional distress is associated with heavy drinking or rapid escalation of drinking, two patterns of drinking that lead to more problematic alcohol-related problems relative to other drinking patterns (Colder et al., 2002). Because bullying victimization is associated with negative emotional states (Nielsen et al., 2015; Luk, Wang, & Simons-Morton, 2010; Ttofi et al., 2011), it is possible that bullying victims use substances as a way to cope with these negative emotions. This idea is supported by research that indicates coping motives (e.g., drinking to cope with negative emotional states) mediates the relationship between bullying victimization and problems associated with risky drinking (Topper, Casellanos-Ryab, Mackie, & Conrad, 2011). Specifically, the authors found that victimization among students aged 13-15 was related both directly and indirectly, through coping motives, to alcohol-related problems.

Although recent meta-analytic reviews support a robust relationship between bullying perpetration and substance use (Ttofi, Farrington, Losel, Crago, & Theodorakis, 2015; Valdebenito, Ttofi, & Eisner, 2015), there are comparatively few studies examining the link between bullying victimization and substance use. Among these, the majority of studies have examined this relationship among middle schools students (Kelly et al., 2015; Peleg-Oren, Cardenas, Comerford, & Galea, 2012; Sullivan et al.,

2006; Tharp-Taylor, Haviland, & D'Amico, 2009) or both middle school and high school students (Doumas, Midgett, & Johnston, 2017; Mitchell, Ybarra, & Finkelhor, 2007; Radliff, Wheaton, Robinson, & Morris, 2012; Ringwalt & Shamblen, 2012; Topper et al., 2011; Wiens, Haden, Dean, & Sivinski, 2010), with limited research conducted specifically with only high school students (Litwiller & Brausch, 2013; Luk et al., 2010). Although bullying begins in elementary school and is most prevalent in middle school, bullying behavior persists into the high school years (U.S. Department of Education, 2015c). Examining the association between bullying victimization and substance use in high school is particularly important as substance use increases from middle school through high school, with high school students reporting the highest rates of alcohol, marijuana, and illicit drug use (Johnston et al., 2016b).

The extant studies reporting results specifically on the relationship between bullying victimization and substance use among high school students demonstrate a positive association, with victims of bullying reporting higher levels of substance use relative to non-victims (Doumas et al., 2017; Litwiller & Brausch, 2013; Luk et al., 2010; Radliff et al., 2012; Topper et al., 2011). Differences in the relationship between bullying victimization and type of substance use among high school students have also been reported in the literature. Research has consistently demonstrated a positive link between bullying victimization and alcohol use (Doumas et al., 2017; Radliff et al., 2012) and illicit drug use (Doumas et al., 2017; Litwiller & Brausch, 2013). In contrast, reports on marijuana use are mixed, with some research reporting no association (Radliff et al., 2012) and other research revealing a positive association (Doumas et al., 2017).

Gender differences have also been considered in the relationship between substance use and victimization. For example, Hong et al. (2014) proposed a conceptual framework that identified gender as a potential moderator of the relationship between adolescent substance use and bullying victimization. Examining gender differences is important, as gender differences have been documented in both rates of bullying victimization and substance use. Specifically, data indicate among students aged 12-18, girls report higher incidence of victimization than boys (U.S. Department of Education, 2015a). In contrast, substance use is higher among males than females, although rates of use among females have begun to approach male rates in recent years (Johnston et al., 2016b). These data suggest that it is possible that the relationship between bullying victimization and substance use may be different for male and female students.

Consistent with the framework proposed by Hong and colleagues (2014), recent longitudinal research examining the relationship between childhood victimization (prior to age 12) and subsequent substance use over the next 15 years demonstrated gender differences (Connolly, 2017). Specifically, for males, those who reported childhood victimization had faster increases in cigarette and marijuana use across time, but not for alcohol use, compared to non-victims. For females, those who reported childhood victimization had faster increases in cigarette use, but not for marijuana or alcohol use, compared to non-victims. We could, however, find only one study examining gender in the relationship between bullying victimization and substance use among a sample that included only high school students (Luk et al., 2010). Results suggested that victimization was positively associated with substance use for both males and females. Depression, however, mediated the relationship between victimization and substance for

females only, suggesting the mechanism by which victimization is related to substance use may be different for males and females. The latent variable substance use, however, included measures of alcohol, marijuana, and tobacco use without investigation of the relationship of victimization to individual substances or to illicit drug use. Further, because substance use increases between the tenth and twelfth grade (Johnston et al., 2016b), it is important to include high school seniors in research examining the relationship between bullying victimization and substance use among high school students.

2.2 The Current Study

Although a growing body of research supports the relationship between bullying victimization and substance use among high school students (Doumas et al., 2017; Luk et al., 2010; Radliff et al., 2012; Topper et al., 2011), several gaps in the literature remain. First, the majority of researchers examined the relationship of bullying victimization and substance use among samples of middle school students (Kelly et al., 2015; Peleg-Oren, Cardenas, Comerford, & Galea, 2012; Sullivan et al., 2006; Tharp-Taylor, Haviland, & D'Amico, 2009) or middle school and high school students combined (Doumas et al., 2017; Mitchell, Ybarra, & Finkelhor, 2007; Radliff, Wheaton, Robinson, & Morris, 2012; Ringwalt & Shamblen, 2012; Topper et al., 2011; Wiens, Haden, Dean, & Sivinski, 2010). Further, researchers examining the relationship between bullying victimization and substance use primarily investigated alcohol and marijuana. However, data on the relationship between bullying victimization and illicit drug use in high school are limited. Next, we could find only one study examining gender differences in the relationship between bullying victimization and substance among high school students specifically

(Luk et al., 2010). This study was limited in that substances were not examined individually, illicit substance use was not included in the model, and the sample contained only tenth grade students. The aim of the current study is to address these gaps by examining differences in the relationship between school bullying victimization and three types of substance use (e.g., alcohol, marijuana, and illicit drugs) among a sample of high school students. Additionally, we investigated gender as a moderator of this relationship. The research questions for this study were: Among high school students, (a) are there differences in the relationship between bullying victimization and substance use for different types of substances? and (b) Does gender moderate the relationship between bullying victimization and substance use?

2.3 Method

2.3.1 Participants and Procedures

Data were obtained from a school district in the capital region of a metropolitan city in the northwest that administered a Substance Use and School Climate Survey (SUSCS) to selected high schools in the district. Participants were 580 (49% male, 51% female) students. Participants were primarily European-American (82.5%), with 6.0% Hispanic, 5.7% Asian, 4.1% African-American, and 1.6% Native American. Teachers and school staff administrated the survey utilizing a standardized script. Students completed the surveys in approximately 45 minutes during a single class period. Student responses were anonymous and participation in the survey was voluntary. All students in class the day the survey was given completed the survey. Although we do not have data on response rate within the schools at the time of the survey, data from the school district indicate an average daily attendance rate of 93-95%. Thus, we estimate the response rate

at greater than 90%. All study procedures were approved by the School District Research Board and the University Institutional Review Board approved analysis of data collected by the schools. Power calculations indicated the current sample size should yield power of ≥ 0.95 to detect a small effect size.

2.3.2 Measures

The school district collected data using the SUSCS which Education Northwest (<http://educationnorthwest.org/>) designed for the school district. The survey assesses substance use, access to substances, perceptions about substance use, school resources, school safety, and school violence. For the purpose of this study, we only used items measuring bullying victimization and substance use.

Bullying Victimization. The SUSCS includes six items that assess frequency of bullying victimization. Students were asked “Have any of the following happened to you at school during the past 30 days?” Students rated responses on a force choice with anchors 0 (*no*) and 1 (*yes*). Example items include “I was pushed around by someone who was just being mean,” “I was afraid of being beat up on the way to or from school,” and “I was called names or put down by other students.” A victim of bullying was defined as a student who endorsed at least one of the six bully victimization items. Based on this classification, 34% of students reported being victims of bullying.

Substance Use. The SUSCS survey included items adapted from the Monitoring the Future survey that were designed to assess the frequency of substance in the past 30 days (Bachman, Johnston, & O’Malley, 1996). Students were asked “How often have you used each of the following drugs in the past 30 days?” Students rated responses on a 5-point Likert scale with anchors 0 (*never*), 1 (*1-2 times*), 2 (*3-5 times*), 3 (*6-9 times*), and 4

(10 or more times). Alcohol use and marijuana use were each measured by one item. Illicit drug use was measured by summing three items measuring cocaine, methamphetamine, and ecstasy use ($\alpha = .85$). Researchers have documented the test-retest reliability of the 30 day use items for alcohol, marijuana, and illicit drug use from .79 - .89 (Johnston, O'Malley, Schulenberg, & Bachman, 2006) and provided evidence for construct validity and the validity of self-report data (Bachman, Johnston, O'Malley, & Schulenberg, 2011).

2.3.3 Statistical Analyses

Analyses were conducted using SPSS version 21. All variables were examined for skew and kurtosis. The distribution for illicit drugs substantially deviated from the normal distribution (> 3 skew and > 9 kurtosis) so a logarithmic transformation was used to normalize the distribution (Tabachnick & Fidell, 2007). Raw means and standard deviations for bully victimization and substance use by gender are presented in Table 2.1. A 2 (victimization status) x 2 (gender) multivariate analyses of variance (MANOVA) was conducted to examine the main effect for bullying victimization status and the victimization x gender interaction effect for alcohol, marijuana, and illicit drug use. Follow-up univariate analyses of variance (ANOVAs) were used to examine main effects and interaction effects for each substance. Simple slopes were used to examine the direction and degree of significant interactions (Aiken & West, 1991). Independent-sample *t*-tests were conducted for post-hoc contrasts. Primary analyses were conducted at $p < .05$ and follow-up analyses used a Bonferroni-adjusted significance of $p < .01$. Effect size was calculated by partial eta squared (η^2_p) and Cohen's *d*.

2.4 Results

Results of the MANOVA indicated a significant main effect for bullying victimization, $Wilks' \Lambda = .96$, $F(3, 574) = 7.75$, $p < .001$, $\eta^2_p = .03$, and a significant victimization x gender interaction effect, $Wilks' \Lambda = .98$, $F(3, 574) = 3.04$, $p < .05$, $\eta^2_p = .02$. Follow-up univariate analyses of variance (using a Bonferroni-adjusted α of .01) revealed a significant main effect for victimization for alcohol use, $F(1, 576) = 7.97$, $p < .01$, $\eta^2_p = .01$, and illicit drug use, $F(1, 576) = 22.12$, $p < .001$, $\eta^2_p = .04$, but not for marijuana use, $F(1, 576) = 3.38$, $p = .07$, $\eta^2_p < .01$. Follow-up analyses also indicated a significant victimization x gender interaction for illicit drug use, $F(1, 576) = 7.33$, $p < .01$, $\eta^2_p = .01$, but not for alcohol use, $F(1, 576) = 1.24$, $p = .27$, $\eta^2_p < .01$, or marijuana use, $F(1, 576) = 0.13$, $p = .72$, $\eta^2_p < .01$. All effect sizes are small ($\eta^2_p = .01$).

Figure 2.1 illustrates the interaction effect between bullying victimization and gender. Post hoc contrasts revealed that male students who reported being victims of bullying reported significantly higher levels of illicit drug use than male students who did not report being victims of bullying, $t(290) = -4.19$, $p < .001$, Cohen's $d = -.46$ and of female victims, $t(197) = -4.11$, $p < .05$, Cohen's $d = -.29$ and non-victims, $t(289) = -4.54$, $p < .001$, Cohen's $d = -.47$. The effect size of the contrast with female victims is in the small (Cohen's $d = .20$) to medium range (Cohen's $d = .50$), whereas the effect size for the contrasts for male non-victims and female non-victims are all in the medium range.

2.5 Discussion

The present study investigated the relationship between bullying victimization and substance use among high school students and the moderating effect of gender.

Results indicated victims of bullying reported higher levels of alcohol use and illicit drug use, but not marijuana use, compared to non-victims. Additionally, for illicit drug use, gender moderated the relationship between bullying victimization and drug use. Specifically, male students who reported bullying victimization reported the highest levels of illicit drug use among high school students. Findings suggest that alcohol use is associated with being a victim of bullying among high school students for both males and females and that being a victim of bullying is also associated with illicit drug use, particularly for males.

Results of this study indicate substance use is associated with bullying victimization among high school students. These findings are consistent with prior research indicating high school students who are victims of bullying report significantly higher level of alcohol use (Doumas et al., 2017; Radliff et al., 2012; Topper et al., 2011) and illicit drug use (Doumas et al., 2017; Litwiller & Brausch, 2013). Results also contribute to the mixed literature regarding marijuana use, supporting prior findings revealing no association between bullying victimization and marijuana use among high schools students (Radliff et al., 2012).

To our knowledge, this study is only the second to evaluate gender as a moderator in the relationship between substance use and bullying victimization specifically among high school students. Prior research suggested that bullying victimization was positively associated with substance use for both males and females (Luk et al., 2010). The current study extended this research by examining individual substances (e.g., alcohol, marijuana, and illicit drugs) in relation to bullying victimization. Our results revealed gender differences for illicit drug use, but not for

alcohol or marijuana use. Specifically, we found significantly higher rates of illicit drug use for male students who are also victims of bullying relative to male non-victims and female students. One explanation for the relationship between bullying victimization and substance use is that negative emotional states are related to being a victim of bullying (Nielsen et al., 2015; Ttofi et al., 2011). It is reasonable to believe that bullying victims turn to substances as a way to self-medicate or cope with their distress. By the time students are in high school, students are using multiple substances are prevalent, with alcohol reported as the most used substance for both males and females (Johnston et al., 2016b). Thus, it makes sense that both male and female victims of bullying would use alcohol, rather than other drugs, to cope with victimization. Rates of illicit drug use, however, are lower, with annual prevalence rates only slightly higher for males (15.7%) than females (14.1%) (Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2016a). Therefore, rates of use do not fully explain why male victims are more likely to use illicit drugs than female victims. Additional research is needed to explain gender differences in the relationship between illicit drug use and bullying victimization.

2.6 Limitations and Directions for Future Research

While this study adds to the literature evaluating the relationship between bullying victimization and substance use, limitations exist. First, the sample is primarily European-American convenience sample, limiting generalizability of results. Second, the ability to determine causality about the variables or to test for directionality of relationships is limited by the use of a cross-sectional design. To extend this study, future research should use a longitudinal design to allow for the examination of the temporal understanding of these connections. Although it seems more likely that substance use

follows bullying victimization, it is conceivable that students are victimized after they begin using substances. Additionally, inclusion of mediating variables, including depression, was beyond the scope of this study but should be included in future research to replicate prior findings that suggest gender differences in the mechanism by which victimization is related to substance use (Luk et al., 2010). A third limitation concerns the measurement of bullying victimization we used in this study. Because the data was obtained from the school district, the authors created a victimization scale from available items to measure this variable. Although the alpha for the scales was adequate, future research using a psychometrically validated scale of victimization should be conducted to replicate these findings. Additionally, we did not examine cyberbullying as it was not included on the survey. Future research should include cyberbullying as it is a prevalent form of bullying that is increasing among high school students (Gan et al., 2014; Schneider, O'Donnell, & Smith, 2015). Further, this study relied on self-report for information which could result in response bias. However, validity and reliability in adolescent self-reports regarding substance use have been demonstrated and it is common practice to use self-reports to measure alcohol use among this age group (Flisher, Evans, Muller, & Lombard, 2004; Lintonen, Ahlstrom, & Metso, 2004). Additionally, this study used anonymous data collection, thus decreasing socially desirable reporting. However, information from parents, peers, school staff, and observation could be used and may be preferable (Swearer, Espelage, Vaillancourt, & Hyme, 2010).

2.7 Counseling Implications

Results of this study highlight the importance of prevention and early intervention programs for both bullying behavior and substance use at the high school level. Thirty-

four percent of students in our sample reported being victims of bullying, and victimization was associated with increased use of alcohol and illicit drugs. This is particularly significant because substance use in high school is associated with continued use in adulthood (Stone et al., 2012) and bullying victimization is also associated with problems later in life (Nielsen et al., 2015; Ttofi et al., 2011). School counselors can use this information to advocate for implementation of school-based programs aimed at decreasing bullying. Results also suggest that school counselors should screen students who report being victims of bullying for substance use. Furthermore, findings indicate counselors need to keep gender differences in mind when working with victims, as illicit drug use was found to be more common among boys reporting bullying victimization than girls.

Although many effective programs exist for the middle school levels to combat bullying behavior (Evans, Frasier, & Cotter, 2014), we could find few programs specifically designed for the high school setting. StandUp: A Program to Prevent Bullying (<http://www.prochange.com/bullying-prevention>) is one example of an online intervention program designed for high school students that aims to reduce bullying behavior by teaching students how to interact with peers in healthy ways. In a preliminary study, StandUp participants demonstrated more use of healthy relationship skills, less perpetration of bullying, less passive participation in bullying, and less risk of experiencing physical or emotional bullying than before participation in the program (Timmons-Mitchell, Levesque, Harris, Flannery, & Falcone, 2016). Although more research is needed to support StandUp as an evidence-based program, preliminary data indicates this program may be a good choice for high school settings.

Additionally, research has shown that when high school students intervene or console peer bullying victims, bullying behavior decreases (Denny et al., 2015). Student bystanders who intervene when they observe bullying also experience benefits, such as increased social support and confidence and decreased feelings of loneliness, relative to students who do not intervene (Olenik-Shemesh, Heiman, & Eden, 2015; Cowie et al., 2002). These studies demonstrate the importance of school-based programs that include strategies to support bystanders to intervene when they witness bullying situations. Examples of bullying bystander programs include KiVa (<http://www.kivaprogram.net/>), a Finnish acronym for *Kiusaamista Vastaan* “against bullying” (Karna, et al., 2012), a comprehensive school-wide program that contains a bystander intervention component, and a brief, school-based bystander intervention, STAC, which stands for “stealing the show,” “turning it over,” “accompanying others,” and “coaching compassion” (Midgett, Dumas, Sears, Lunquist, & Hausheer, 2015). These programs have been shown to be effective in reducing bullying (Karna, et al., 2012; Yang & Salmivalli, 2015) and increasing protective factors among bystanders to buffer against the negative impacts of bullying (Midgett et al., 2015) among junior high/middle school students. Although we could find no research examining the efficacy of these programs with high school students, these may be promising programs for the high school setting.

School counselors can also work individually with students who report bullying victimization to develop healthy coping skills, thereby reducing the risk of substance use. This is helpful as a prevention effort, but is equally important as an intervention if students identify as victims of bullying or are using substances. Several approaches exist to help teach students how to cope in healthy ways. School counselors can use Cognitive

Behavioral Therapy (CBT; e.g., Goldfried & Davison, 1976; Meichenbaum, 1977) to help students learn to reframe negative thoughts (Arnberg & Ost, 2014; Hoffmann, Asnaani, Vonk, Sawyer, & Fang 2012). Dialectical Behavioral Therapy (DBT; e.g., Linehan, 1987) is also a useful technique that teaches students to regulate emotions (Cook & Gorraiz, 2016; MacPherson, Cheavens, & Fristad, 2013). Mindfulness training (e.g., Linehan, 1993) has also been shown to improve positive coping and deal with negative effects of stress and has potential for use in the school setting (Tadlock-Marlo, 2011). Teaching students healthy coping strategies may serve as a buffer between experiencing bullying victimization and substance use.

Findings also suggest that school counselors should conduct substance use screenings for students who report being victims of bullying. This is particularly true for male students as results of this study show that male victims of bullying are significantly more likely to use illicit drugs than females. Screening, Brief Intervention, and Referral to Treatment (SBIRT; SAMHSA, 2012) is an evidence-based practice that school counselors can use to screen for substance use and make appropriate referrals when necessary (Levy & Knight, 2008). Screening is initially conducted to identify individuals at risk for unintended consequences related to their substance use (Levy & Knight, 2008). Unintended consequences may be physical in nature (e.g., injuries, sexually transmitted diseases), family/school related issues, or may refer to the development of a substance use disorder. The CRAFFT (Knight et al., 1999) is a commonly used six-item screening tool with appropriate psychometrics for the adolescent population (Mitchell, Gryczynski, O'Grady, & Schwartz, 2013). Following screening, those individuals at risk are offered a brief intervention which is typically grounded in motivational interviewing (Miller &

Rollnick, 2012) and is able to be conducted in as little as 15-minutes (Curtis, McLellan, & Gabellini, 2014). For those individuals at more severe-risk a referral to treatment may be provided either following or in lieu of the brief intervention. The outcomes associated with SBIRT for adolescents are encouraging and include reduction in drinking to intoxication and reduction in illicit drug use (Mitchell et al., 2012). SBIRT services have also been found to be effectively implemented into the school setting (Curtis et al., 2014).

Counselors who work with high school students outside of the school setting can also work with student clients to develop healthy coping skills. Community counselors can also advocate for implementation of school-based bullying prevention programs among their local high schools. Similar to school counselors, community counselors can work with adolescents who report being victim of bullying to develop healthy coping skills and use SBIRT to screen for substance use. Additionally, when adolescents present with substance use issues, community counselors should screen for bullying victimization and, if present, work with the adolescent on ways to cope with bullying.

2.8 Conclusion

This study aimed to investigate gender differences in the relationship between substance use and bullying victimization among high school students. Findings indicated that victimization is related to alcohol and illicit drug use among high school students. Additionally, males who reported bully victimization reported the highest levels of illicit drug use. Findings indicate it is important to invest in prevention and intervention efforts to decrease bullying behavior as bullying victimization is associated with substance use among high school students. The authors suggest that school counselors work to develop school-based programs that address bullying behavior. Further, the authors recommend

that counselors in all settings provide coping skills training to provide students with positive coping techniques and utilize SBIRT to screen for substance use when working with students who report bullying victimization.

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Table 2.1 Means and Standard Deviations for Substance Use by Bullying Victimization Status and Gender

	Victims		Non-Victims	
	Males	Females	Males	Females
Alcohol	1.89 (1.26)	1.72 (0.91)	1.54 (0.92)	1.57 (1.03)
Marijuana	1.96 (1.48)	1.72 (1.18)	1.79 (1.39)	1.47 (1.07)
Illicit Drugs	3.80 ^a (2.43)	3.24 ^b (1.37)	3.05 ^b (0.52)	3.02 ^b (0.20)

Note. Standard deviations are in parentheses. Means with different subscripts differ significantly at $p < .01$.

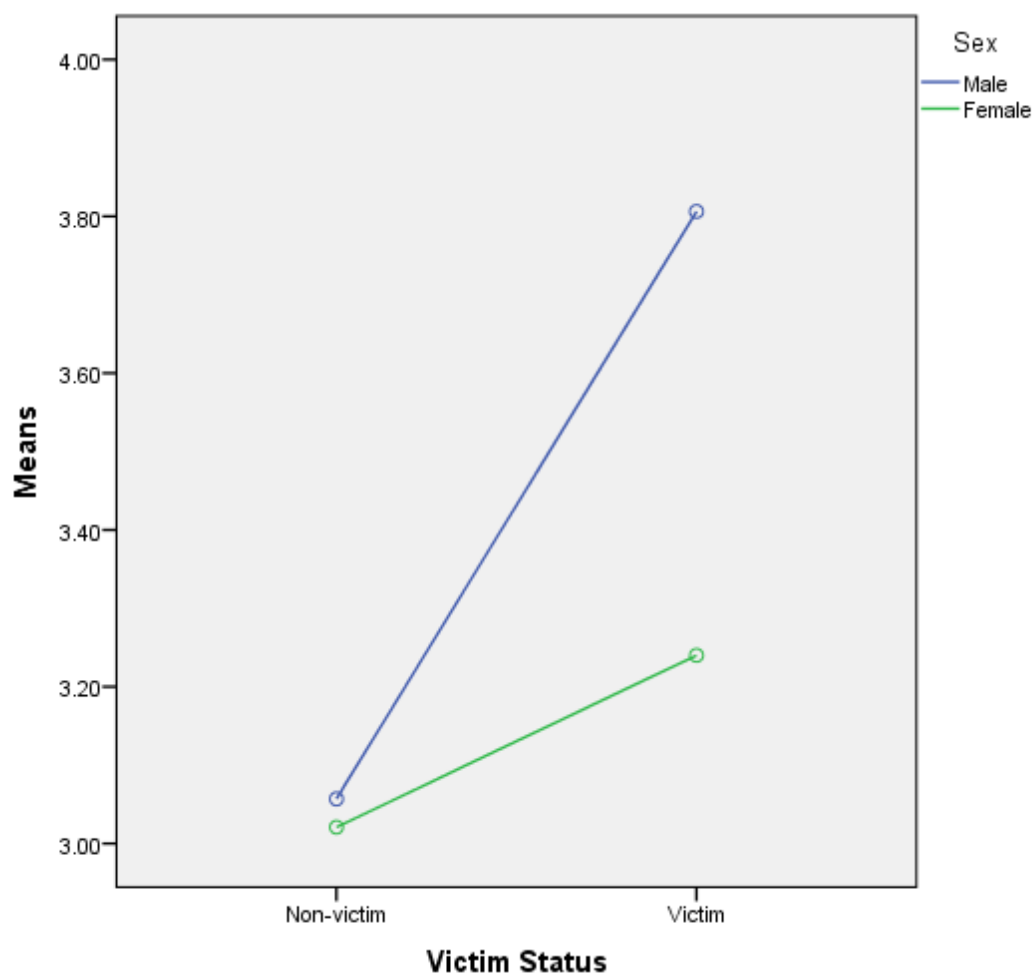


Figure 2.1 Relationship Between Bullying Victimization and Gender for Illicit Drug Use

CHAPTER THREE: A MIXED METHODS EVALUATION OF THE “AGED-UP”
STAC BULLYING BYSTANDER INTERVENTION FOR HIGH SCHOOL
STUDENTS

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A Mixed Methods Evaluation of the “Aged-Up” STAC Bullying Bystander Intervention
for High School Students

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Abstract

This mixed methods study assessed the appropriateness of an “aged-up” brief bullying bystander intervention (STAC) and explored the lived experiences of high school students trained in the program. Quantitative results included an increase in knowledge and confidence to intervene in bullying situations, awareness of bullying, and use of the STAC strategies. Utilizing the consensual qualitative research (CQR) methodology, we found students spoke about (a) increased awareness of bullying situations leading to a heightened sense of responsibility to act; (b) a sense of empowerment to take action, resulting in positive feelings; (c) fears related to intervening in bullying situations; and (d) the natural fit of the intervention strategies. Implications for counselors include the role of the school counselor in program implementation and training school staff to support student “defenders,” as well as how counselors in other settings can work with clients to learn the STAC strategies through psychoeducation and skills practice.

Keywords: bullying, bystander intervention, consensual qualitative research (CQR), high school, mixed methods

3.1 Introduction

Researchers have defined bullying as “when one or more students tease, threaten, spread rumors about, hit, shove, or hurt another student over and over again” (Centers for Disease Control & Prevention, 2017, p. 7). Bullying includes verbal, physical, or relational aggression, as often occurs through the use of technology (e.g., cyberbullying; Center for Disease Control and Prevention [CDCP], 2016). National statistics indicate approximately 20.5% of high school students are victims of bullying at school and 15.8% are victims of cyberbullying (CDCP, 2016). Although school bullying peaks in middle

school, it remains a significant problem at the high school level with the highest rates of cyberbullying reported by high school seniors (18.7%) (U.S. Department of Education, 2016).

There are wide-ranging negative consequences experienced by students who are exposed to bullying as either a target or bystander (Bauman, Toomey, & Walker, 2013; Dumas, Midgett, & Johnston, 2017; Hertz, Everett Jones, Barrios, David-Ferdon, & Holt, 2015; Rivers & Noret, 2013; Rivers, Poteat, Noret, & Ashurst, 2009; Smalley, Warren, & Barefoot, 2017). High school students who are *targets* of bullying report higher levels of risky health behaviors, including physical inactivity, less sleep, risky sexual practices (Hertz et al., 2015), elevated substance use (Dumas et al., 2017; Smalley et al., 2017), and also higher levels of depression and suicidal ideation (Bauman et al., 2013; Smalley et al., 2017). Adolescents who *observe* bullying as bystanders also report associated negative consequences, and in some instances, report more problems than students who are directly involved in bullying situations (Rivers et al., 2009; Rivers & Noret, 2013). Specifically, bystanders have been found to be at higher risk for substance abuse and overall mental health concerns than students who are targets (Rivers et al., 2009). Bystanders also are significantly more likely to report symptoms of helplessness and potential suicidal ideation compared to students not involved in bullying (Rivers & Noret, 2013). Furthermore, although bystanders are often successful when they intervene on behalf of targets of bullying (Gage et al., 2014), bystanders usually do not intervene because they do not know what to do (Forsberg, Thronberg, & Samuelsson, 2014; Hutchinson, 2012). Failure to respond to observed bullying leads to feelings of guilt (Hutchinson, 2012) and coping through moral disengagement (Forsberg et al.,

2014). Thus, there is a need to train bystanders to intervene to both reduce bullying and buffer bystanders from the negative consequences associated with observing bullying without acting.

To address the negative effects that can result from being exposed to bullying, researchers have developed numerous bullying prevention and intervention programs for implementation within the school setting. Many of these programs are comprehensive, school-wide interventions (Polanin, Espelage, & Pigott, 2012; Ttofi, Farrington, Lösel, & Loeber, 2011). However, findings indicate these programs are most effective for students in middle and elementary school (Yeager, Fong, Lee, & Espelage, 2015). Additionally, a recent meta-analysis indicates that bystander intervention is an important component of bullying intervention; however, few comprehensive programs include a bystander component (Polanin et al., 2012). Further, those programs that do include a bystander component have been normed on children within the context of the classroom setting (Salmivalli, 2010). High school students experience greater independence at school, with less adult supervision in the hallways and at lunch, and move to different classroom locations throughout the day. Thus, there is a need for effective bullying bystander interventions that have been “aged up,” specifically for the high school level (Denny et al., 2015).

3.1.1 The STAC Program

The STAC program is a brief, bystander intervention that teaches students who witness bullying to intervene as “defenders” (Midgett, Dumas, Sears, Lundquist, & Hausheer, 2015). The STAC acronym stands for the four bullying intervention strategies taught in the program: “Stealing the show,” “turning it over,” “accompanying others,”

and “coaching compassion.” The second author created the STAC program for the middle and elementary school level with the intention of establishing school counselors as leaders in program implementation. The program includes a 90-minute training with bi-weekly, 15-minute small group follow-up meetings, placing low demands on schools for implementation. Findings from studies conducted at the elementary and middle school level indicate students trained in the STAC program report an increase in knowledge and confidence to intervene as “defenders” (Midgett et al., 2015; Midgett & Dumas, 2016; Midgett, Dumas, & Trull, 2017), as well as increased use of the STAC strategies (Midgett, Dumas, & Trull, 2017). Additionally, research demonstrates students trained in the STAC program report reductions in bullying (Midgett, Dumas, & Johnson, 2017), as well as increases in self-esteem (Midgett, Dumas, & Trull, 2017) and decreases in anxiety (Midgett, Dumas, Trull, & Johnston, 2017), compared to students in a control group.

3.1.2 Development of the STAC Program for High School

The authors conducted a previous, qualitative study to inform the modification of the original STAC program to be appropriate for the high school level (for details, please see Midgett, Dumas, Johnston, et al., 2017). Based upon data generated from high school students, the authors “aged-up” the STAC program by incorporating the following content into the didactic and role-play components of the training: a) cyberbullying through social media and texting, b) group dynamics in bullying, and c) bullying in dating and romantic relationships. The authors also “aged-up” the program by including developmentally appropriate language (e.g., breaks vs. recess) and content including common locations where bullying occurs (e.g., school parking lot vs. the school bus) and

age-appropriate examples of physical bullying (e.g., covert behaviors such as “shoulder checking,” “backpack checking,” and “tripping” vs. physical fights).

3.2 Purpose of the Study

The purpose of this study was to extend the literature by evaluating the appropriateness of the “aged-up” STAC program for the high school level and explore the experiences of students trained in the program. Following guidelines suggested by Leech and Onwuegbuzie (2010), the literature review guided the formulation of the study rationale, goal, objectives, and research questions. Despite the need to provide anti-bullying programs to high school students, the majority of bullying intervention research has been conducted with elementary and middle school students (Denny et al., 2015). Although intervening on behalf of students who are targets of bullying is associated with positive outcomes (Hawkins et al., 2001), research on bystander intervention programs “aged-up” for high school students is limited. The present authors could find only one program, *StandUP*, developed specifically for high school students. Results of a pilot study indicated students participating in the 3-session *StandUP* online program reported an increase in positive bystander behavior and decreases in bullying behavior (Timmons-Mitchell, Levesque, Harris, Flannery, & Falcone, 2016). The research noted several methodological limitations that limit the generalizability and validity of the findings, including a 6.8% response rate, 22% attrition rate with differential attrition by race and bullying status, and the use of a single-group design.

Thus, the goal of this study was to add to the knowledge on bullying interventions for high school students. Our objectives are to (a) examine the influence of the STAC program on knowledge and confidence, awareness of bullying, and use of the STAC

strategies, and (b) describe and explore the experience of high school students participating in the STAC intervention. We were interested in the answering the following mixed method research questions: (a) Do students trained in the “aged-up” STAC intervention report an increase in knowledge and confidence to intervene as “defenders”? (b) Do students trained in the “aged-up” STAC intervention have an increased awareness of bullying? (c) Do students trained in the “aged-up” STAC intervention use the STAC strategies to intervene when they observe bullying? and (d) What were high school students’ experiences of participating in the “aged-up” STAC intervention and using the STAC strategies to intervene in bullying situations?

3.3 Methods

3.3.1 Mixed Research Design

A mixed methods design was implemented with a single group of participants who completed the STAC training. We were interested in the influence of the STAC intervention on students’ knowledge and confidence, awareness of bullying, and use of the STAC strategies. An additional interest was to understand students’ experiences of the STAC training. The purpose of selecting a mixed methods design was to maximize interpretation of findings, as mixed methods designs often result in a greater understanding of complex phenomena than either quantitative or qualitative studies can produce alone (Creswell, 2013). Hesse-Biber (2010) also advocates for the convergence of qualitative and quantitative data to enhance and triangulate findings. Following the guidelines described by Leech and Onwuegbuzie (2010), we chose to supplement the quantitative data with qualitative data to investigate the in-depth, lived experiences of high school students trained as “defenders” in the “aged-up” STAC program. Our

research design was a partially mixed, sequential design (Creswell, 2009; Leech & Onwuegbuzie, 2010). The quantitative design was a single group repeated measures design and the qualitative component includes Consensual Qualitative Research (CQR; Hill et al., 2005).

3.3.2 Participants

Our sampling design was sequential-identical (Leech & Onwuegbuzie, 2010), with the same participants completing surveys followed by focus groups. The sample consisted of 22 students ($n = 15$ females [68.2%]; $n = 7$ males [31.8%]) recruited from a public high school via stratified random sampling in the Northwestern region of the United States. Participants ranged in age from 15-18 years old ($M = 16.82$ and $SD = 0.91$), with reported racial backgrounds 59.1% White, 18.2% Asian, 13.6% Hispanic, and 9.1% African-American. Of the 22 participants trained in the STAC program, 100% participated in follow-up focus groups and follow-up data collection.

3.3.3 Procedures

The current study was completed as part of a larger study designed to develop and test the effectiveness of the “aged-up” STAC intervention. Following institutional research board approval, the researchers randomly selected 200 students using stratified proportionate sampling and the obtained parental consent and student assent from 57 students, for a response rate of 28.5%. The current sample consists of the 22 students who participated in the STAC intervention. The recruiting team included school counselors, a doctoral student, and master’s students. A team member met briefly with students selected to discuss the project and provided an informed consent form to be signed by a parent or guardian. A team member met with students with parental consent to explain

the research in greater detail and to obtain student assent. Researchers trained participants in the 90-minute “aged-up” STAC program and then conducted two, 15-minute bi-weekly follow-up meetings for 30 days following the training. Students completed baseline, post-training, and 30-day follow-up surveys. Six weeks after the STAC training, team members conducted three 45-minute open-ended, semi-structured focus groups to investigate students’ experiences being trained as “defenders” in the “aged-up” STAC program. Researchers audio-recorded the focus groups for transcription purposes. The team provided pizza to students after the follow-up survey and at the end of each focus group. The university and school district review boards approved all procedures.

3.3.4 Measures

Knowledge and Confidence to Intervene. The Student-Advocates Pre- and Post-Scale (SAPPS; Midgett et al., 2015) was used to measure knowledge of bullying, knowledge of the STAC strategies, and confidence to intervene. The questionnaire is comprised of 11 items that measure student knowledge of bullying behaviors, knowledge of the STAC strategies, and confidence intervening in bullying situations. Examples of items include: “I know what verbal bullying looks like,” “I know how to use humor to get attention away from the student being bullied,” and “I feel confident in my ability to do something helpful to decrease bullying at my school.” Items are rated on a 4-point Likert Scale ranging from 1 (*I totally disagree*) to 4 (*I totally agree*). Items are summed to create a total scale score. The SAPPS has established content validity and adequate internal consistency with Cronbach’s alpha ranging from .75 - .81 (Midgett et al., 2015; Midgett & Dumas, 2016; Midgett, Dumas, & Trull, 2017; Midgett, Dumas, Trull, & Johnston, 2017). Cronbach’s alpha was .83 for this sample.

Awareness of Bullying. Awareness of bullying was assessed using one item. Students were asked to respond *Yes* or *No* to the following question: “Have you seen bullying at school in the past month?” Prior research has used this question to test the impact of the STAC program on observing and identifying bullying behavior post-training (Midgett, Dumas, Trull, & Johnston, 2017).

Use of STAC Strategies. The use of each STAC strategy was measured by a single item. Students were asked, “How often would you say that you used these strategies to stop bullying in the past month? (a) Stealing the Show – using humor to get the attention away from the bullying situation, (b) Turning it Over – telling an adult about what you saw, (c) Accompanying Others – reaching out to the student who was the target of bullying, and (d) Coaching Compassion – helping the student who bullied develop empathy for the target.” Items were rated on a 5-point Likert Scale ranging from 1 (*Never/Almost Never*) to 5 (*Always/Almost Always*). Prior research has used these items to examine use of STAC strategies post-training (Midgett, Dumas, Trull, & Johnston, 2017).

High School Students’ Experiences. Researchers followed Hill et al.’s (2005) recommendation to develop a semi-structured interview protocol to answer the question, “What were high school students’ experiences of participating in the ‘aged-up’ STAC intervention and using the STAC strategies to intervene in bullying situations?” Researchers developed questions based on previous qualitative findings with middle school students (Midgett, Moody, Reilly, & Lyter, 2017), quantitative results indicating students trained in the program use the STAC strategies (Midgett, Moody, et al., 2017), and a review of the literature (Jacob & Furgerson, 2012). Researchers asked students the

following questions: 1) Can you please talk about the personal values you had before the STAC training that were in line with what you learned during the STAC training? 2)

Please share your experience using the STAC strategies (“stealing the show,” “turning it over,” “accompanying others,” and “coaching compassion”), 3) Can you share how using the STAC strategies made you feel about yourself? 4) How did being trained in the STAC program impact your relationships? 5) Can you please talk about your fears related to using the strategies in different bullying situations? and 6) Overall, what was it like to be trained in the STAC program and use the STAC strategies?

3.3.5 The STAC Intervention

The STAC intervention began with a 90-minute training which included information about bullying and strategies for intervening in bullying situations (for details, see Midgett et al., 2015). Following the training, facilitators met with students twice for 15-minutes throughout the subsequent 30 days to support them as they applied what they learned in the training. During these meetings, researchers reviewed the STAC strategies with students, asked students about bullying situation they witnessed and whether they utilized a strategy. If students indicated they observed bullying but did not utilize a strategy, researchers helped students brainstorm ways in which they could utilize one of the four STAC strategies in the future.

Didactic Component. The didactic component included ice-breaker exercises, an audiovisual presentation, two videos about bullying, and hands-on activities to engage students in the learning process. Students learned about (a) the complex nature of bullying in high school often involving group dynamics rather than single individuals; (b) different types of bullying with a focus on cyberbullying and covert physical bullying; (c)

characteristics of students who bully, including the likelihood they have been bullied themselves, to foster empathy and separate the behavior from the student; (d) negative associated consequences of bullying for students who are targets, perpetrate bullying, and bystanders; (e) bystander roles and the importance of acting as a “defender;” and (f) the STAC strategies used for intervening in bullying situations. The four strategies are described below.

“Stealing the Show.” “Stealing the show” involves using humor or distraction to turn students’ attention away from the bullying situation. Trainers teach bystanders to interrupt a bullying situation to displace the peer audience’s attention away from the target (e.g., tell a joke, initiate a conversation with the student who is being bullied, or invite peers to play a group game such as basketball).

“Turning it Over.” “Turning it over” involves informing an adult about the situation and asking for help. During the training, students identify safe adults at school who can help. Students are taught to always “turn it over” if there is physical bullying taking place or if they are unsure as to how to intervene. Trainers also emphasized the importance of documenting evidence in cyberbullying cases by taking a screenshot or picture of the computer or cell phone over time for authorities (i.e., school principal and resource officer) to take action.

“Accompanying Others.” “Accompanying others” involves the bystander reaching out to the student who was targeted to communicate that what happened is not acceptable, that the student who was targeted is not alone, and that the student bystander cares about them. Trainers provide examples of how students can use this strategy either directly, by inviting a student who was targeted to talk about the situation, or indirectly

by approaching a peer after they were targeted and inviting them to go to lunch or spend time with the bystander. This strategy focuses on communicating empathy and support to the student who was targeted.

“Coaching Compassion.” “Coaching compassion” involves gently confronting the student who bullied either during or after the bullying incident to communicate that his or her behavior is unacceptable. Additionally, the student bystander encourages the student who bullied to consider what it would feel like to be the target in the situation, thereby fostering empathy toward the target. Bystanders are encouraged to implement “coaching compassion” when they have a relationship with the student who bullied or if the student who bullied is in a lower grade and the bystander believes they will respect them.

Role-Plays. Trainers divided students into small groups to practice the STAC strategies through role-plays that included hypothetical bullying situations. The team developed the scenarios based on student feedback on types of bullying that occur in high school including cyberbullying, romantic relationship issues, and covert physical bullying (Midgett, Doumas, Johnston, Trull, & Miller, 2017). See Appendix A for the scenarios.

Post-Training Groups. STAC training participants met in 15-minute groups with two graduate student trainers twice in the 30 days post-training. In these meetings, students reviewed the STAC strategies, shared which strategies they used, and explained whether they felt the strategies were effective in intervening in bullying. Trainers also addressed questions and supported students in brainstorming other ways to implement the strategies, including combining strategies or working as a group to intervene together.

3.4 Data Analysis

3.4.1 Quantitative

The authors used quantitative analyses to test for significant changes in knowledge and confidence and to provide descriptive statistics for frequency of awareness of bullying and the use of the STAC strategies. An a priori power analysis was conducted using the G*Power 3.1.3 program (Faul, Erdfelder, Lang, & Buchner, 2007) for a repeated-measures within-subjects (ANOVA) with three time points. Results of the power analysis indicated a sample size of 20 was needed for power of ≥ 0.80 to detect a medium effect size for the main effect of time with an alpha level of .05. Thus, the final sample size of 22 met the needed size to provide adequate power for analyses.

Before conducting primary analyses, all variables were examined for outliers and normality. The authors found no outliers and all variables were within the normal range for skew and kurtosis. To assess changes in knowledge and confidence, we conducted a GLM repeated-measures analysis of variance (ANOVA) with one independent variable, time (baseline; post-intervention; follow-up) and post-hoc follow-up paired *t*-tests to examine differences between time points. To evaluate awareness of bullying, we computed descriptive statistics to determine how many participants observed bullying at baseline and follow-up. To evaluate the use of STAC strategies, we computed descriptive statistics to examine the frequency of use of each strategy at the follow-up assessment. The authors used an alpha level of $p < .05$ to determine statistical significance and used partial eta squared (η^2_p) as the measure of effect size for the repeated-measures ANOVA and Cohen's *d* for paired *t*-test with magnitude of effects interpreted as follows: Small

($\eta^2_p \geq .01$; $d = .20$), medium ($\eta^2_p \geq .06$; $d = .50$), large ($\eta^2_p \geq .14$; $d = .80$) (Cohen, 1969; Richardson, 2011). All analyses were conducted using SPSS version 24.0.

3.4.2 Qualitative

The authors conducted focus groups and employed CQR methodology to investigate participant experiences (Hill et al., 2005). Specifically, CQR was chosen because it uses elements from phenomenology, grounded theory, and comprehensive process (Hill et al., 2005). CQR is predominantly constructivist with postmodern influence (Hill et al., 2005) which was a good fit for the project as we were interested in students' experiences being trained in the "aged-up" STAC program. Furthermore, we selected CQR because it includes semi-structured interviews to promote the exploration of participant's experiences, while also allowing for spontaneous probes that can uncover related experiences and insights, adding depth to findings (Hill et al., 2005). CQR was well suited for this study because it requires a team of researchers working together to reach consensus analyzing complex data (Hill et al., 2005). Focus groups were chosen because they allow researchers to observe participants' interactions and shared experiences such as teasing, joking, and anecdotes that can add depth to the findings (Kitzinger, 1995). Focus groups have potential therapeutic benefits for participants, including increasing feelings of self-worth (Powell & Single, 1996) and empowerment (Race, Hotch, & Parker, 1994). Additionally, focus groups can be especially useful when power differentials exist between participants and decision makers (Morgan & Kreuger, 1993).

Three team members (first and second authors and a master's in counseling student) employed the CQR methodology to analyze the data. After the data transcription,

each member worked individually to identify domains and core ideas prior to meeting as a group. The team met three times in the next month to achieve consensus. Researchers relied on participant quotes to resolve disagreements, to cross-analyze the data, and to move into more abstract levels of analysis (Hill et al., 2005). The team labeled domains as general (typical of all but one participant or all participants), typical (more than half of participants), and variant (at least two participants) (Hill et al., 2005). An external auditor analyzed the data separately utilizing Nvivo qualitative analysis software (Version 10; 2012) and reported similar findings with the exception of a minor modification to one domain, which the team incorporated into final findings. Next, the researchers conducted member checks (Lincoln & Guba, 1985) by emailing all participants with an overview of findings. All participants who responded agreed the findings were an accurate representation of their experience.

Strategies for Trustworthiness. As recommended by Hays, Wood, Dahl, & Kirk-Jenkins, et al. (2016), we used multiple strategies to strengthen the trustworthiness of the study. First, our process was reflexive with continuous awareness of expectations and biases. Prior to conducting focus groups, we discussed and wrote memos about our expectations and biases (Creswell, 2013). To triangulate data, all three analysts were involved throughout the process and comparing findings among the team. An external auditor was included to provide oversight and increase credibility of findings. Once all researchers reached agreement about major findings, we elicited participant feedback to increase credibility and confirmability of our findings (Lincoln & Guba, 1985).

3.5 Findings

3.5.1 Quantitative

Knowledge and Confidence

The researchers examined changes in knowledge and confidence across three time points (baseline; post-intervention; follow-up). Results indicated a significant main effect for time, Wilks' Lambda = .31, $F(2, 20) = 6.85$, $p < .000$, $\eta^2_p = .31$. Follow-up paired t-tests indicated a significant difference in knowledge and confidence between baseline ($M = 35.68$, $SD = 4.35$) and post-intervention ($M = 40.64$, $SD = 3.11$), $t(21) = -6.52$, $p < .001$, Cohen's $d = -1.46$, between baseline ($M = 35.68$, $SD = 4.35$) and 30-day follow-up ($M = 40.68$, $SD = 4.10$), $t(21) = -4.96$, $p < .001$, Cohen's $d = -1.06$, but not between post-intervention ($M = 40.64$, $SD = 3.11$) and 30-day follow-up ($M = 40.68$, $SD = 4.10$), $t(21) = -0.05$, $p = .96$, Cohen's $d = -.01$. Findings indicate students reported an increase in knowledge and confidence from baseline to post-intervention, and this increase was sustained at the 30-day follow-up.

Awareness of Bullying

The researchers examined rates of observing bullying at baseline and at the 30-day follow-up to determine if students became more aware of bullying after being trained in the STAC program. Rates of observing bullying increased from 54.5% to 63.6%, indicating that the STAC program raised awareness of bullying.

Use of the STAC Strategies

The researchers examined how frequently students in the intervention group used the STAC strategies at the 30-day follow-up. Among students who reported witnessing bullying (63.6%, $n = 14$), 100% indicated using one or more STAC strategy in the past

month. Specifically, 64.3% reported using “stealing the show,” 42.9% reported using “turning it over,” 100% reported using “accompany others,” and 85.7% reported using “coaching compassion.”

3.5.2 Qualitative

Through CQR analysis, the team agreed on four domains with supporting core ideas. All of the domains below are general or typical and endorsed by participants via member checks.

Domain 1: Awareness and Sense of Responsibility

Participants ($n = 8$; 57%) talked about the STAC program enhancing their awareness of bullying behavior and increasing their sense of responsibility to act. Students spoke about some types of bullying being difficult to recognize, and the STAC training helped them become more aware of covert bullying situations. One participant gave an example about being able to recognize types of bullying that can often be overlooked. The student shared, “People look like they’re joking around and you kinda ignore it but now, it’s like, they’re not [joking]. You can tell a little bit. I think it [the STAC program] brought it [awareness] out in us.” Students also talked about their experience being able to recognize different types of bullying and being equipped to intervene, as well as becoming aware that their actions can have an impact on others. One participant shared that “learning the different ways you can address it [bullying] also helps you realize the different forms it happens in, so it makes you value being aware of what’s going on and how your own actions affect other people.” Another student also spoke about the connection between being trained to act as a “defender” and a newfound sense of responsibility and shared that after STAC, “there’s not really a reason to say that

you don't want to [get involved] because you're scared, because you know what's happening to the person is wrong and if you can change it, you should." Another participant stated that "there's some others that don't have this training, so we're the ones that should be stepping in if we see it. Everyone should, but [...] we know what to do."

Domain 2: Empowerment and Positive Feelings

Participants ($n = 9$; 64%) spoke about a sense of empowerment and associated positive feelings that came from using the STAC strategies to intervene in bullying situations. For example, one participant stated, "it makes you feel a little bit more empowered because you realize you actually can make a difference in someone else's life or in the whole community at your school or community in general." Students also talked about the STAC program empowering them to make decisions about their friendships. A participant shared, "I actually told some people I didn't want to talk to them or be friends with them [because] I can't be around someone who is making fun of people with disabilities or whatever, you know? So, it changed the way I picked my friends." Some students talked about the association between a sense of empowerment to make a difference in a bullying situation and feeling good about themselves and helping other students. A student spoke, "I feel like it made us feel good like we made a positive difference in some way regarding the person that's being bullied. So it makes it feel like we did something good like a good deed." Another student shared, "somebody actually went to talk to him [ethnic minority student who was bullied]... and that was me. It was good to see him happy after he was feeling sad."

Domain 3: Fears

Almost all participants ($n = 12$; 86%) spoke about how acting as a “defender” elicited fears related to judgment from peers or creating tension with friends. For example, one student shared, “I have a fear of being judged which is kind of the thing of bullying. So, I try not to be so active with people at school.” Another participant also talked about fears related to peer judgment and creating tension with friends when utilizing the STAC strategy “accompanying others” by having lunch with a student who was a target of bullying. The student said, “it’s a social fear, or like ‘why are you hanging out with them?’ [...] and it’s kind of tense between you and your other friends because you brought this person that they didn’t want.” Students also talked about fears of making a situation worse. In particular, participants spoke about fears about reporting bullying situations to adults by using the STAC strategy “turning it over.” For example, one participant stated, “when you get teachers involved or your parents or something, it [bullying] kind of... escalates, yeah [...] a lot of kids will avoid going to adults if they can until it gets physical. However, most participants were encouraged to act despite their fears, and many discovered that the STAC program allowed them to overcome their fears. One participant stated, “I think starting out, my biggest fear was that it [STAC strategies] wasn’t going to do anything, that nothing was going to change, but it really did, and I was pretty shocked that I had a positive effect on people.”

Domain 4: Natural Fit of STAC Strategies and Being Equipped to Intervene

Many participants ($n = 10$; 71%) indicated the STAC strategies were a natural fit and equipped them with tools to intervene when they witnessed bullying. For example, one student shared, “Stealing the show [was a natural fit]. I think it happened during

accelerated PE. Someone was making fun of someone's bench max, and I could tell the person was uncomfortable, so I just made a joke or something and changed the subject." Another student stated, "When I was doing accompanying others, I didn't really think about STAC strategies, it was just a natural reaction I feel." Another participant spoke about "coaching compassion": "It's probably one of my favorite ones because it actually does something in the moment [and] it actually taught me how I can put out the effort without feeling uncomfortable when doing it." Further, participants shared that implementing the strategies increased their knowledge and confidence to intervene. For example, one participant shared, "You know when to use them [the strategies] and when it's not necessary and how far you should go when using them." The strategies seemed to successfully meet participants at their level of understanding and equip them with more structure and guidance to intervene more confidently and consistently.

3.6 Discussion

The purpose of this study was to investigate the appropriateness of the "aged-up" STAC program for the high school level and to explore the experiences of high school students trained in the program. Quantitative data indicated students trained in the "aged-up" program reported an increase in knowledge and confidence to intervene, an increase in awareness of bullying, and also reported using the STAC strategies when they observed bullying at school. Qualitative data enhanced the interpretation of quantitative findings, depicting students' experiences being trained in the program and using the STAC strategies.

Findings indicate that participating in the STAC training was associated with an increased awareness and sense of responsibility. Reported rates of observing bullying

increased from baseline to the 30-day follow-up (54.5% to 63.6%). These findings are consistent with research showing students trained in the STAC program report increased awareness of bullying behavior (Midgett, Doumas, Trull, & Johnston, 2017). Further, students indicated that once they became aware of covert bullying, they felt responsible to intervene. One explanation for this finding is that participating in the training leads to an increase in awareness of bullying situations, which promotes a sense of responsibility to act. This explanation is consistent with research which suggests that awareness of negative consequences to others leads to an increase in feelings of personal responsibility, which in turn, leads to action (de Groot & Steg, 2009).

Our data also revealed that the STAC training was associated with an increase in knowledge and confidence and a sense of empowerment associated with positive feelings and changes in friendships. These findings are consistent with research showing that when students intervene in bullying situations they feel a sense of congruence, a positive sense of self (Midgett, Moody, et al., 2017), and a sense of well-being (Schwartz, Keyl, Marcum, & Bode, 2009). Researchers have also shown that when bystanders do not intervene, the lack of action leads to guilt (Hutchinson, 2012) and moral disengagement (Forsberg et al., 2014). Further, researchers have found that students have a desire to belong to a peer group with similar values in “defending” behaviors as their own (Sijtsema, Rambaran, Caravita, & Gini, 2014). Thus, it is possible that the confidence and positive feelings associated with being trained to act as “defenders” extended to feeling empowered to disengage from peers who do not intervene on behalf of targets of bullying.

Results also indicated students used “turning it over” the least frequently among the strategies, with only 49% of students using this strategy. This finding is in direct contrast to research with middle school students suggesting “turning it over” is used by 91% of students (Midgett, Dumas, Trull, & Johnston, 2017). Qualitative data revealed that students felt fearful about intervening; specifically, students talked about being afraid that “turning it over” to an adult would make the situation worse. This finding parallels research suggesting that high school students believe adults at school do not handle bullying effectively (Midgett, Dumas, Johnston, et al., 2017) and that when they report bullying to teachers, the situation either remains the same or worsens (Fekkes, Pijpers, & Verloove-Vanhorick, 2005). Coupled with research indicating students are more likely to report bullying when they believe their teachers will act (Cortes & Kochenderfer-Ladd, 2014) and will be effective in intervening (Veenstra, Lindenberg, Huitsing, Sainio, & Salmivalli, 2014), our findings suggest it may be useful to provide teachers with knowledge and skills so that they may effectively support students who report bullying.

Finally, findings indicated that 100% of students who witnessed bullying post-training used at least one STAC strategy and that students experienced the STAC strategies as a natural fit and felt equipped with tools to act in bullying situations. These findings are consistent with prior research indicating students trained in the STAC program report using the strategies (Midgett, Moody, et al., 2017; Midgett, Dumas, Trull, & Johnston, 2017). The most frequently used strategies were “accompanying others” and “coaching compassion,” used by 100% and 85.7% of students, respectively. One explanation for these two strategies being the most natural fit for students is that the formation of peer relationships is an important developmental priority for adolescents

(Wang & Eccles, 2012). “Accompanying others” allows students to foster relationships in a way that feels natural and altruistic. Also, as adolescents mature emotionally and their ability to empathize grows (Allemand, Steiger, & Fend, 2014), thus “coaching compassion” can encourage bystanders and students who bully to develop empathy towards targets.

3.7 Limitations and Future Research

Although this study contributes to the literature regarding developmentally appropriate bullying interventions for high school students, several limitations must be considered. First, because of our small sample size and lack of control group, we cannot make causal attributions or generalize our findings to the larger high school student population. Although we enhanced the significance of our findings with a mixed methods design, there is a need for future studies investigating the efficacy of the “aged-up” STAC program through a randomized controlled trial (RCT). Further, since our study was intended as a first step in the development of an age-appropriate program for high school, we did not assess decreases in bullying victimization or perpetration. Therefore, future RCT studies should include these outcome variables. Another limitation is related to the measures used. Specifically, both awareness of bullying and use of each STAC strategy were measured by a single item, which can result in decreased reliability. Further, although the developers constructed the items to have face validity, there are no studies investigating the psychometric properties of these items in measuring awareness of bullying or use of the STAC strategies. Additionally, our quantitative and qualitative findings were based on self-report data. It is possible that students’ responses were influenced by their desire to please the researchers, especially within the context of the

focus groups. Thus, including objective measures of observable “defending” behaviors would strengthen the findings.

3.8 Practical Implications

Our findings provide important implications for counselors both in the school and other settings. First, high school counselors can implement “aged-up” bullying intervention programs such as the STAC program. High school counselors can find encouragement in our findings indicating high school students are invested in helping reduce school bullying and that being trained to intervene can be associated with increased awareness and sense of responsibility. Further, findings suggest it might be helpful for school counselors to provide students trained in the program with an opportunity to meet in small groups to foster friendships with peers who are committed to acting as “defenders.”

Results also suggest that high school students believe reporting bullying to adults may not be an effective strategy. School counselors are well positioned as student advocates to establish anonymous reporting procedures to counteract potential student fears related to being negatively perceived when they report bullying to adults. In all bullying intervention efforts, school counselors should coordinate with administration to ensure success. School counselors also can facilitate teacher and staff development to help them understand students’ fears related to reporting bullying and provide teachers with necessary tools to help students who report bullying to them. Additionally, although a teacher training would increase the required time and resources needed to implement the STAC program, it may be an important addition at the high school level. In this module, school counselors could educate teachers about bullying and the STAC strategies

so that teachers could reinforce the strategies with students. The training would emphasize “turning it over,” explaining to teachers their important role in helping student bystanders intervene when they observe bullying.

Lastly, this study also has implications for counselors working with adolescents outside the school setting. There are negative associated consequences to witnessing bullying as a bystander (Rivers et al., 2009; Rivers & Noreat, 2013). In addition, adolescents report not knowing how to intervene on behalf of targets (Forsberg et al., 2014; Hutchinson, 2012) which can lead to feelings of guilt (Hutchinson, 2012). Thus, counselors can empower clients to act as “defenders” by providing psychoeducation regarding the STAC strategies. They can focus on strategies that clients feel are a natural fit as a starting point. Counselors can encourage clients to share bullying situations they most commonly observe at school and invite clients to talk through how they could use a favorite STAC strategy.

Bullying is a significant problem among high school students. This study provided support for the “aged-up” STAC intervention as an anti-bullying approach that is appropriate for high school students. Specifically, the STAC program helped students be more aware of bullying, feel a stronger sense of responsibility to intervene, and feel empowered to use the STAC strategies.

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CHAPTER FOUR: THE EFFICACY OF A BRIEF, SCHOOL-BASED BYSTANDER
BULLYING INTERVENTION ON HIGH SCHOOL STUDENT ALCOHOL USE

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The Efficacy of a Brief, School-Based Bystander Bullying Intervention on High School
Student Alcohol Use

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Abstract

We examined the efficacy of a brief, bystander bullying intervention on reducing alcohol use among high school students ($n = 61$). As hypothesized, high-risk drinkers in the intervention group reported reduced drinking compared to control students at a 30-day follow-up.

Keywords: alcohol use, high-risk drinking, bullying intervention, STAC

4.1 Introduction

Adolescent alcohol use is a significant public health concern in the United States. Results of a national survey indicate that by their senior year, 61.5% of high school students report having used alcohol and 45.3% report being drunk at least once in their lifetime (Johnston, Miech, et al., 2018). Additionally, 16.6% of high school seniors report binge drinking at least once in the past two weeks (Johnston, Miech, et al., 2018). Further, researchers have found that adolescent alcohol use, particularly heavy drinking, has wide ranging consequences including decreased neuropsychological functioning (Nguyen-Louie et al., 2015), changes in neural development (Cservenka & Brumback, 2017), and increased risky health behaviors, including suicide attempts, risky sexual behavior, and increased use of other substances (Miller, Naimi, Brewer, & Jones, 2007). Problematic alcohol use patterns established in high school also extend into adulthood (D'Amico, Elickson, Collins, Martino, & Klein, 2005; Kenney, LaBrie, & Hummer, 2010; Patrick, Terry-McElrath, Schulenberg, & Bray, 2017).

Because high school drinking is associated with significant consequences both during high school and later in life, it is important to target risk factors that may contribute to alcohol use. From a socio-ecological perspective (Merrin, Espelage, &

Hong, 2018), it is important to not only consider individual risk factors (e.g., age of drinking onset, beliefs about alcohol, alcohol expectancies, perceptions of peer use) but also environmental factors (e.g., substance availability, opportunity for use, familial factors, and peer influences) that may contribute to high school alcohol use. Researchers have also identified bullying as a peer-related environmental factor that is associated with alcohol use among both targets (Doumas, Midgett, & Johnston, 2017; Johnston, Doumas, Midgett, & Moro, 2017; Lee, Hong, Resko, & Tripodi, 2018; Radliff, Wheaton, Robinson, & Morris, 2012) and perpetrators (Lee et al., 2018; Merrin et al., 2018; Rivers, Poteat, Noret, & Ashurst, 2009) of bullying in high school.

Within the bullying literature, there are relatively few studies on psychological consequences of being a bystander compared to studies that focus on targets or perpetrators of bullying. Examining the impact of bullying on bystanders is important because as many as 70.6% of students report witnessing bullying at school (Bradshaw, Sawyer, & O'Brennan, 2007). The few studies that have described socio-emotional consequences of being a bystander indicate that being a bystander is associated with feelings of isolation and guilt (Hutchinson, 2012), helplessness (Rivers & Noret, 2013), and suicidal ideation (Rivers & Noret, 2010; 2013). Researchers have also demonstrated that witnessing bullying is associated with a wide range of negative mental health outcomes, including anxiety and depression, over and above the effects of being a target or perpetrator of bullying (Midgett & Doumas, in press; Rivers et al., 2009). Additionally, students who witness bullying as bystanders are more likely to use substances, including alcohol, than students who are targets or perpetrators of bullying (Rivers et al., 2009).

One way adolescents may cope with negative feelings associated with witnessing bullying is by using substances, including alcohol (Doumas et al., 2017). For example, research indicates targets of bullying may use substances to cope with the negative emotional states associated with victimization (Topper, Casellanos-Ryab, Mackie, & Conrad, 2011). Similarly, bystanders also may develop a self-medicating coping style. In a national survey, high school seniors who used substances reported that they did so to relieve tension or relax, to escape from problems, and to deal with feelings of frustration or anger (Terry-McElrath, Stern, & Patrick, 2017). Further, the researchers reported that drinking to cope with negative emotions was significantly more likely among high school students who reported high-intensity drinking (i.e., consuming 10 or more drinks over a two-week period). These findings are consistent with previous research showing that drinking to cope with negative emotions is associated with rapid drinking escalation and heavy drinking, which are both patterns of alcohol use that tend to be more problematic (Cooper, 1994; Colder et al., 2002).

One way to address the issue of using alcohol to cope with negative emotions when witnessing bullying is to equip students with strategies to intervene in bullying situations. Researchers have identified four bystander roles that students assume when they witness bullying (i.e. “assistant,” “reinforcer,” “outsider,” and “defender;” (Salmivalli, Lagerspet, Björkqvist, Österman, & Kaukiainen, 1996). Students who assume the “assistant” and “reinforcer” roles support the bullying by actively joining in the bullying or providing positive feedback to the bully. “Outsiders” leave the situation or observe from a distance. Only “defenders” intervene on behalf of the target of bullying. Unfortunately, only 20% to 30% of students act as “defenders” (O’Connell, Pepler, &

Craig, 1999; Salmivalli & Voeten, 2004), perhaps because bystanders do not know what to do to intervene effectively (Forsberg, Sammuelson, & Thornberg, 2014; Hutchinson, 2012). Research indicates when bystanders act as “defenders,” they experience reductions in internalizing symptoms such as depression and anxiety (Williford et al., 2012). Thus, bystander interventions designed to train students to effectively intervene in bullying situations may represent a promising approach to reducing alcohol use related to coping with witnessing bullying but not having skills to intervene. The majority of bullying interventions, however, focus on reducing consequences for targets, not bystanders, and the intervention programs often place high demands on schools for implementation (Salmivalli & Poskiparta, 2012).

4.1.1 The STAC Program

STAC is an acronym for the four strategies, “stealing the show,” “turning it over,” “accompanying others,” and “coaching compassion,” trainers teach students. The STAC program was developed specifically as a brief, bystander intervention designed to equip students with tools to intervene as “defenders” when they witness bullying (Midgett, Dumas, Sears, Lundquist, & Hausheer, 2015). The STAC intervention is based on Bandura’s social learning theory (Bandura, 1970) which suggests that individuals model behaviors when they perceive others as influential, similar in terms of personal characteristics, and rewarded for their behavior. When bystanders act as “reinforcers” or “assistants,” they reward the perpetrator (Salmivalli, Voeten, & Poskiparta, 2011), providing reinforcement for bullying. In contrast, a single student of high status, or a group of students acting as “defenders” can shift power from the perpetrator (Salmivalli, 2014), discontinuing reinforcement of perpetrators and modeling pro-social behavior.

Researchers have also demonstrated that adolescent prosocial behavior is influenced by peers, particularly those with high status (Choukas-Bradley, Giletta, Cohen, & Prinstein, 2015). Additionally, because the presence of peers enhances several areas of the brain associated with socialization, peer presence can positively impact prosocial behavior, especially when peers receive feedback from each other (Van Hoorn, Van Dijk, Guroglu, & Crone, 2016). Further, there is some evidence that peer influences may become internalized into prosocial norms (Choukas-Bradley et al., 2015).

The STAC intervention is a 90-minute program that includes a didactic and experiential training followed with bi-weekly, 15-minute booster sessions (Midgett, Dumas, Trull, & Johnston, 2017). Following social learning theory principles and research on adolescent prosocial behavior, the intervention was designed to be implemented with leaders from a variety of peer groups. The authors originally developed STAC for the middle school level and then modified it to be appropriate for the high school level (Dumas, Midgett, & Watts, 2018; Johnston, Midgett, Dumas, & Moody, 2018; Midgett, Dumas, Johnston, Trull, & Miller, 2017). Researchers have found that the STAC program effectively increases high school students' knowledge, confidence, and use of the STAC strategies to intervene in bullying situations (Dumas et al., 2018a; Johnston, Midgett, et al., 2018). Participation in the STAC program is also associated with a decrease in depressive symptoms among high school students (Dumas, Midgett, & Watts, in press; Midgett & Dumas, in press).

4.2 The Current Study

Although the literature demonstrates an association between bullying and alcohol use among high school students (Dumas et al., 2017; Johnston et al., 2017; Lee et al.,

2018; Merrin et al., 2018; Radliff et al., 2012; Rivers et al., 2009), few researchers have examined alcohol use among bystanders (Rivers et al., 2009). One explanation for the relationship between witnessing bullying and alcohol use is that students may not know what to do when they observe bullying (Forsberg et al., 2014). Bystanders may experience negative emotions, including feelings of guilt (Hutchinson, 2012), hopelessness (Rivers & Noret, 2013), depression, and anxiety (Midgett & Dumas, in press; Rivers et al., 2009), which may lead to coping through alcohol use (Topper et al., 2011). Thus, training high school students to effectively intervene when they witness bullying may reduce alcohol use among bystanders. To date, however, we could find no studies examining the impact of a bystander intervention on alcohol use among high school students who witness bullying.

The aim of the current study is to address this gap in the literature by evaluating the efficacy of a brief, bystander bullying intervention, STAC, on reducing alcohol use among high school students trained to intervene when witnessing bullying. We were also interested in whether or not the intervention would be more effective among students who are high-risk drinkers, as drinking to cope is more prevalent among high school students who reported high-intensity drinking (Terry-McElrath et al., 2017). To achieve this aim, students were randomly assigned to either an intervention group or control group. We hypothesized that (a) High school students participating in a bullying bystander intervention will report greater reductions in alcohol use relative to students in a control group and (b) Intervention effects will be moderated by drinking risk-status, such that intervention effects will be larger for students classified as high-risk drinkers relative to students classified as low-risk drinkers.

4.3 Method

4.3.1 Research Design

We utilized a randomized controlled trial design within one high school. We randomly assigned students to either the bystander intervention ($n = 31$) or an assessment-only control condition ($n = 34$). Participants completed baseline and 30-day follow-up assessments. All study procedures were approved by the University Institutional Review Board and the School District Research Board.

4.3.2 Participants

This study was completed as part of a larger study designed test the efficacy of the adapted STAC intervention for high school students. We recruited students from one urban high school with a total student population of approximately 1,300 students in the Northwest (see Figure 1 for the participant flow diagram). The school was chosen because of school counselors and administrators expressed interest in implementing and evaluating the STAC program at their school. Demographic information is provided in Table 1. Overall, 93.9% ($n = 61$) of the 65 participants completed both the baseline and 30-day follow-up assessments. Chi-square analyses revealed no differences for gender, $\chi^2(1) = .24, p = .62$, grade, $\chi^2(2) = 1.56, p = .46$, or ethnicity, $\chi^2(5) = 1.28, p = .94$, between those who completed both assessments and those who did not. Additionally, there were no differences in the rate of attrition across the two groups, $\chi^2(1) = 1.27, p = .26$.

4.3.3 Procedures

We used purposeful sampling to select students that teachers and school counselors perceived as leaders among diverse peer groups. Students from different peer

groups were nominated by teachers based on perceived leadership. School counselors and the administration team met to determine which students were eligible for the study based on a rubric with criteria including qualities such as leadership and peer influence. A counselor education doctoral graduate assistant met with students individually to explain the study and provided informed parental informed consent and student assent forms to students who expressed interest ($n = 151$). Students were reminded in person and via email to bring signed consent and assent back to the school counselor. Students who agreed to participate were given a unique personal identification number (PIN) to maintain confidentiality. Baseline data was collected near the end of the fall semester. Students in the control group returned to class and students in the intervention group stayed with the research team to attend the STAC training. Counselor education graduate and doctoral research assistants visited the school twice for 15-minute check-ins every other week post-training and then returned to collect 30-day follow up data. The researchers provided all participants with a “pizza party” at the end of the study.

4.3.4 Measures

Demographic Survey. Participants completed a brief demographic questionnaire with questions about age, gender, grade, and race/ethnicity.

Alcohol Use. Alcohol use was assessed using the Daily Drinking Questionnaire (DDQ; Collins, Parks, & Marlatt, 1985) and the Quantity/Frequency/Peak Questionnaire (QFP; Dimeff Baer, Kivlahan, & Marlatt, 1999; Marlatt et al., 1998). Weekly drinking was assessed with the question “Given that it is a typical week, please write the number of drinks you probably would have each day.” A response scale was provided for each day of the week (e.g., Monday, Tuesday, etc.). A drink was defined as “a 12-ounce can or

bottle of beer, a 4-ounce glass of wine, or a shot of distilled spirits in a mixed drink.”

Weekly drinking quantity was calculated by combining the reports for the seven days of the week. Peak drinking quantity was assessed by the question “What is the most number of drinks that you have consumed on any given night in the past month?”

Classification of High-Risk vs Low-Risk Drinkers. We classified participants who reported one or more episodes of heavy episodic drinking in the past 30 days as high-risk drinkers. Heavy episodic drinking was defined as having 5 or more drinks in a two-hour period for males and 3 or more drinks in a two-hour period for females (Donovan, 2009). Using this definition, 16.9% of students were classified as high-risk drinkers and 83.1% were classified as low-risk drinkers.

4.3.5 The STAC Intervention

The STAC intervention for high school includes a 90-minute training consisting of didactic and experiential components (for details, see Johnston, Midgett, et al., 2018). Trainers provide education about bullying and teach students the four STAC strategies. The intervention also includes 15-minute follow up groups that occur twice during the month following the training. These group meetings aim to reinforce students’ use of the strategies and brainstorm ways to intervene more effectively.

Didactic Component. The 90-minute didactic training includes ice-breaker activities, an audiovisual presentation which includes a video about bullying, and group activities to engage students in learning how to intervene. The presentation includes information about (a) the complexities of high school bullying, including group bullying, (b) the different types of bullying with an emphasis on covert, physical bullying and cyberbullying, (c) characteristics of students who bully, including the probability they

have been targets of bullying, (d) negative consequences of bullying for students who are targets, perpetrate bullying, and are bystanders, (e) various bystander roles and the importance of intervening as a “defender,” and (f) the STAC strategies used for intervening in bullying. The STAC strategies are described below.

“Stealing the Show.” “Stealing the show” involves using humor or distraction to redirect students’ attention from the bullying. Bystanders are trained how to interrupt a bullying situation to displace other students’ attention away from the target and from the bullying situation so that other students do not join in or reinforce bullying.

“Turning it Over.” “Turning it over” involves informing a trusted adult about the situation and asking for assistance or guidance. Specifically, in cases of overt physical bullying, cyberbullying, or if students are unsure as to how to intervene, students are taught to “turn it over” to ensure student safety. Trainers discuss the importance of documenting cyberbullying and how to report it to school authorities such as a student resource officer (SRO) or principal.

“Accompanying Others.” “Accompanying others” involves the bystander reaching out to the targeted student to express that what happened is not acceptable, that the target is not alone, and that the student bystander cares about them. Trainers teach students to approach a peer after they were targeted to invite them to spend time together. “Defenders” are told they can either ask peers who were targeted if they would like to talk about what happened or “defenders” can implement this strategy indirectly by conveying empathy and support through spending time with the targeted student.

“Coaching Compassion.” “Coaching compassion” involves the bystander using gentle confrontation with the perpetrator(s) of bullying, either during or after a bullying

incident. “Defenders” convey that bullying behavior is unacceptable. In addition, the bystander encourages the perpetrator to have empathy for the target. Trainers teach bystanders to implement this strategy when they have a relationship established with the perpetrator or if the bystander believes they will be viewed as a higher-status peer, relative to the student who bullied.

Role-Plays. Students form small groups to practice the STAC strategies. Role-plays include hypothetical bullying scenarios. Example scenarios include: “Your friends are hanging out at your house after school, looking through Twitter. One friend decided to follow someone from school that they do not like, and then repost one of their posts to make fun of them. This is not the first time your friend has done something like this.”

Training Conclusion. The training ends with the small groups coming together and each student sharing his or her preferred STAC strategy, signing a petition indicating “bullying stops with me,” and receiving a certificate of participation.

Post-Training Booster Sessions. Two bi-weekly, 15-minute group meetings take place during the month after the training. Trainers facilitate discussion about the STAC strategies students have used and how effective they seemed. Trainers help students brainstorm ways to use the strategies more effectively and in different ways.

Intervention Fidelity

The researchers created a video for all graduate student trainers to watch prior to involvement in the STAC program. The third author and a school counseling internship student were present at the 90-minute training to ensure it was accurately delivered and they rated the training on a dichotomous scale, *Yes* or *No*, to evaluate whether presenters accurately taught the definition and types of bullying, the STAC strategies, and whether

they deviated from training materials. Furthermore, researchers assessed whether student trainers conducted all role-plays in the training. Both the third author and internship student agreed that the presenters and student helpers involved in the training had 100% adherence to the training materials. Additionally, the researchers followed a standard set of scripted questions for the booster sessions.

For an additional measure of intervention fidelity, we examined changes in knowledge and confidence from pre-training to immediate post-training to determine if students in the intervention group learned the material in the STAC intervention. To assess this information, we administered the Student-Advocates Pre- and Post-Scale (SAPPS; see Midgett et al., 2015). The measure includes 11 items that assess student knowledge of bullying behaviors, knowledge of the STAC strategies, and confidence intervening in bullying situations. Examples of items include: “I know what verbal bullying looks like” and “I feel confident in my ability to do something helpful to decrease bullying at my school.” Items are rated on a 4-point Likert Scale ranging from 1 (*Totally Disagree*) to 4 (*Totally Agree*) and summed to create a Total Scale score. The SAPPS has established content validity and adequate internal consistency (Midgett et al., 2015) with Cronbach’s alpha of .83 for high school students (Johnston, Midgett, et al., 2018). For this study, Cronbach’s alpha was .81. Results indicated a significant increase in the Total Scale from baseline ($M = 35.09$, $SD = 4.75$) to immediate post-training, ($M = 42.00$, $SD = 2.75$), $t(30) = -8.78$, $p < .001$, Cohen’s $d = -1.81$.

Power Analysis

We conducted an a priori power analysis using the G*Power 3.1.3 program (Faul, Erdfelder, Lang, & Buchner, 2007) for a repeated measures mixed-model analysis

(ANOVA) with two time points (baseline; 30-day). Results of the power analysis indicated a sample size of 48 is needed for power of 0.80 to detect a medium effect size of .25 for the 3-way interaction effect of Time x Group x Risk-Status with an alpha level of .05. Thus, our final sample size of 59 is greater than the needed size to provide adequate power for our analyses.

4.4 Statistical Analyses

Prior to analysis, we examined the outcome variable for outliers at baseline and follow-up assessments and we adjusted outliers to 3.3 SD above the mean before conducting analyses (Tabachnik & Fidell, 2007). We confirmed that students in the intervention and control groups were equivalent with respect to demographics and the baseline outcome with *t*-tests for continuous variables and chi-square tests for categorical variables. We used general linear model (GLM) repeated measures analysis of variance (ANOVA) to examine the intervention effects across time and risk status as a moderator of intervention effects across time for the outcome variable. The three fixed effects were Time (baseline; follow-up), Group (intervention; control), and Risk Status (high-risk; low-risk). Post-hoc GLM repeated measures ANOVAs were conducted separately for high-risk and low-risk students to determine the nature of the significant 3-way interactions. Due to the small sample size in the high-risk group, we used effect size calculations, rather than significance testing, to examine post-hoc comparisons. Simple slopes were also plotted to examine the direction and degree of significant interactions testing moderator effects (Aiken & West, 1991). We calculated effect size using partial eta squared (η^2_p) for ANOVA analyses, with .01 considered small, .06 considered medium, and .14 considered large (Cohen, 1969; Richardson, 2011). Analyses were

considered significant at $p < .05$ and were conducted in SPSS version 24. We controlled for Type 1 error by using the Holm-Bonferroni procedure (Holm, 1979). We selected this method as it corrects for Type I error as effectively as the traditional Bonferroni procedure, but retains more statistical power (Bender & Lange, 2001; Eichstaedt, Kovatch, & Maroof, 2013; Wright, 1992). Means for each of the dependent variables by group and risk-status are shown in Table 2.

4.5 Results

Hypothesis One

Our first hypothesis was that students participating in the intervention would report greater reductions in alcohol use relative to students in the control group. We tested group effects on alcohol use over time by examining the Time x Group interaction. We found significant effects for both weekly drinking, Wilks' Lambda = .92, $F(1, 57) = 4.95$, $p < .05$, $\eta^2_p = .08$, and peak drinking, Wilks' Lambda = .88, $F(1, 57) = 7.70$, $p < .01$, $\eta^2_p = .12$. As seen in Table 2, means for the total sample indicate that students in the intervention group reduced their weekly drinking and peak drinking significantly more than those in the control group.

Hypothesis Two

Our second hypothesis was that intervention effects would be moderated by drinking risk-status, such that intervention effects would be larger for students classified as high-risk drinkers relative to students classified as low-risk drinkers. We tested moderation effects by examining the Time x Group x Risk-Status interaction. We found significant effects for both weekly drinking, Wilks' Lambda = .92, $F(1, 57) = 4.95$, $p < .05$, $\eta^2_p = .08$, and peak drinking, Wilks' Lambda = .89, $F(1, 57) = 7.07$, $p < .001$, $\eta^2_p =$

.11. Follow-up analyses indicated a medium to large effect size for the Time x Group interaction for high-risk students for weekly drinking, $\eta^2_p = .10$, and a large effect size for peak drinking, $\eta^2_p = .17$. In contrast, for low-risk students, the effect size for the Time x Group interaction was small for both weekly drinking, $\eta^2_p = .00$, and for peak drinking, $\eta^2_p = .00$. As seen in Figure 2, findings indicate that high-risk students in the intervention group reduced their weekly drinking and peak drinking more than those in the control group.

4.6 Discussion

The purpose of this study was to evaluate the efficacy of a brief, bystander bullying intervention on reducing alcohol use among high school students. This study also tested the moderating effect of drinking risk-status on intervention effects. To our knowledge, this is the first study to examine the impact of a bystander bullying intervention on reducing alcohol use among high school students who witness bullying. Overall, our findings demonstrated a significant difference in reductions in alcohol use between the intervention and control group. Further, intervention effects were moderated by drinking risk-status such that students classified as high-risk drinkers in the intervention group reported greater reductions in alcohol use relative to high-risk drinkers in the control group. Findings suggest that training students who witness bullying to intervene as “defenders” is effective in reducing alcohol use among students who report heavy episodic drinking.

Consistent with our first hypothesis, results indicated a significant difference in reduction of alcohol use between the intervention and control groups. Specifically, students in the intervention group reported greater reductions in both weekly drinking and

peak drinking quantity relative to students in the control group. This finding extends the limited research on the positive impact of bystander interventions on students who witness bullying. Specifically, literature shows that when bystanders intervene as “defenders” in bullying situations, they experience a decrease in depression and anxiety (Williford et al., 2012). Further, in a study evaluating the efficacy of the STAC program in reducing symptoms of depression among high school who witness bullying, students in the intervention group demonstrated a reduction in symptoms of depression relative to students in the group (Midgett & Dumas, in press). Because one way bystanders may cope with negative emotions associated with observing bullying is to use substances (Dumas et al., 2017), it is possible that participation in the STAC program led to a decrease in negative emotional states, thereby reducing alcohol use.

Our second hypothesis was that intervention effects would be moderated by drinking risk-status. As predicted, group differences in reductions in weekly drinking and peak drinking quantity were medium to large for students classified as high-risk drinkers ($\eta^2_p = .10 - .17$) and were small for students classified as low-risk drinkers ($\eta^2_p = .00$). This finding is consistent with a review of literature on adolescent drinking motives which demonstrated that heavy drinkers are more likely to drink to cope with negative affect than other categories of alcohol users, including moderate drinkers (Kuntsche et al., 2005). Thus, it is possible that learning to act as “defenders” lessened high-risk drinkers’ negative emotions associated with witnessing bullying, resulting in a decrease in alcohol use among this group. The finding that there were no group differences in changes in alcohol use among low-risk drinkers may be because students who do not

drink or drink less have other coping skills and do not turn to alcohol to deal with the distress they may experience when witnessing bullying.

4.6.1 Limitations and Directions for Future Research

Although this study adds to the literature examining the impact of a bystander bullying intervention on alcohol use, there are limitations. First, the sample was small and recruited from one school with a primarily White student body, limiting the generalizability of the results. Further, although we found significant group differences in the reduction in alcohol use in the high-risk group, the sample size of in the high-risk group was quite small ($n = 11$), limiting our examination of post-hoc comparisons to effect sizes. The percentage of participants in the high-risk group (16.9%), however, reflects the national percentage of high school seniors who report heavy episodic drinking (16.6%; Johnston, Miech, et al., 2018). Additionally, because the STAC intervention was designed to train students identified as leaders from diverse peer groups, the sample was comprised of student leaders, further limiting generalizability. Therefore, the authors recommend future research with larger, more ethnically and racially diverse samples and school-wide implementation of the STAC program to strengthen the external validity of the findings.

Second, although research indicates bystanders experience negative emotions as a result of witnessing bullying (Midgett & Dumas, 2018; Hutchinson, 2012; Rivers et al., 2009; Rivers & Noret, 2013) and that students may use alcohol to cope with negative feelings (Dumas et al., 2017; Topper et al., 2011), we did not measure negative emotional states related to witnessing bullying or drinking to cope with negative emotional states. Because data collection occurred during class time, we were limited in

terms of survey length and were unable to include these measures. We suggest examining these variables as mediators of the relationship between the intervention and alcohol use in future research. For example, researchers may consider including measures that assess student's emotional response to witnessing a bullying incident (e.g., Social and Emotional Maladjustment Scale [SeMS]; Swearer, 2001; Werth, Nickerson, Aloe, & Swearer, 2015) and drinking motives, including drinking to cope (e.g., Drinking Motives Questionnaire Revised[DMQ-R]; Cooper, 1994) to gain a greater understanding of the process by which the STAC intervention impacted alcohol use. Additionally, because witnessing bullying as a bystander may lead to use of other substances such as marijuana (Rivers et al., 2009), further research could evaluate the impact of the STAC program on reducing use of other substances in addition to alcohol.

Next, the relatively short follow-up of 30 days is also a limitation of the study. Future studies should include longer follow-up times (e.g., 3-months, 6-months, 12-months) to evaluate whether results are sustained beyond 30 days. Finally, study results were obtained through self-report which may lead to response bias. Self-reported alcohol use, however, is a common practice in research with demonstrated reliability and validity in studies examining alcohol use among adolescents (Flisher, Evans, Muller, & Lombard, 2004; Lintonen, Ahlstrom, & Metso, 2004).

4.6.2 Counseling Implications

Findings from this study have important implications for both school counselors and counselors working in other settings. First, results suggest that school-based bullying intervention programs have positive outcomes that extend beyond reducing bullying and the negative effects on targets of bullying. Specifically, results of this study demonstrate

that bullying interventions focusing on training bystanders to act as “defenders” may buffer students from the negative effects of witnessing bullying, including coping by using alcohol. Thus, implementing school-wide bullying programs that include a bystander component (e.g., Kiva; Salmivalli, Voeten, & Poskiparta, 2011) or stand-alone bystander programs such as the program used in this study, may be promising approaches not only to reduce bullying, but to address alcohol use associated with witnessing bullying as a bystander.

Next, school counselors and counselors working outside of the school setting should screen for both alcohol use and witnessing bullying and understand that these two issues might be related. That is, if a counselor becomes aware that a student or client is witnesses bullying, screening for alcohol use may be warranted, particularly if the teen does not know how to respond to bullying. Similarly, if a counselor learns that a student or client is using alcohol, inquiring about witnessed bullying could also be helpful, particularly for those who report heavy drinking. Screening, Brief Intervention, and Referral to Treatment (SBIRT; SAMHSA, 2012) is an evidence-based practice that counselors working with adolescents can use to screen for alcohol use. To screen for bystander status, we encourage counselors to foster ongoing, open communication with students so they are more likely to report instances of observing bullying to counselors. In addition, counselors should also ask students directly if they witness bullying and how they react to bullying situations. A passive response from students could indicate that they need more tools to recognize and respond to witnessing bullying. Providing bystander training to these students could be particularly helpful in order to prevent or reduce coping with alcohol. Empowering students with tools to use when they witness

bullying may alleviate negative feelings that come from not knowing what to do (Williford et al., 2012), thereby reducing coping with alcohol use.

Finally, findings from this study indicate 16.9% of students identified as leaders among a diverse range of peer groups reported heavy episodic drinking. Counselors may be aware that a significant percentage of high school students engage in risky drinking practices, but may not anticipate high-risk drinking from students identified as leaders who may be perceived as lower-risk. Additionally, counselors might assume that student leaders know what to do when witnessing bullying. Thus, counselors should direct efforts to reduce alcohol use and screen for bystander status to all high school students, including those identified as leaders, who may otherwise be overlooked.

4.7 Conclusion

The aim of this study was to evaluate the efficacy of a brief, bystander intervention on alcohol use among high school students. Findings indicated that students in the intervention group significantly decreased both weekly drinking and peak drinking quantity at the 30-day follow up. We also found that drinking risk-status moderated intervention effects such that reductions in drinking were limited to students classified as high-risk drinkers. This study extends the literature supporting the efficacy of a bystander bullying intervention in reducing the negative impact of witnessing bullying among high school students.

4.8 References

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Table 4.1 Sample Characteristics by Study Group

	Control Group	Intervention Group	Total Sample
Characteristics	(n = 34)	(n = 31)	(n = 65)
Age in years, <i>M</i> (<i>SD</i>)	16.29 (0.97)	16.29 (0.82)	16.29 (0.95)
Gender			
Male	47.1%	29.0%	38.5%
Female	52.9%	71.0%	61.5%
Race/Ethnicity			
White	76.5%	77.4%	76.9%
Hispanic	11.8%	9.7%	10.8%
Asian-American	0.0%	6.5%	3.1%
African-American	5.9%	3.2%	4.6%
Pacific Islander	2.9%	3.2%	3.1%
Other	2.9%	0.0%	1.5%

Table 4.2 Means and Standard Deviations for Alcohol Use by Study Condition and Risk-Status

		Risk-Status		
		Low-Risk ^a	High-Risk ^b	Total Sample ^c
Outcomes		<i>M (SD)</i>	<i>M (SD)</i>	<i>M(SD)</i>
Weekly Drinking Quantity				
Control	Baseline	0.00 (0.00)	2.38 (1.19)	0.58 (1.17)
	Follow-Up	0.00 (0.00)	2.50 (1.85)	0.60 (1.39)
Intervention	Baseline	0.04 (0.20)	3.67 (2.31)	0.43 (1.32)
	Follow-Up	0.04 (0.20)	2.33 (3.21)	0.29 (1.15)
Peak Drinking Quantity				
Control	Baseline	0.08 (0.40)	3.50 (1.60)	0.91 (1.70)
	Follow-Up	0.00 (0.01)	3.13 (1.46)	0.76 (1.52)
Intervention	Baseline	0.24 (0.66)	4.00 (3.46)	0.64 (1.64)
	Follow-Up	0.12 (0.33)	1.67 (2.89)	0.29 (0.98)

^a Control Group $n = 25$; Intervention Group $n = 25$.

^b Control Group $n = 8$; Intervention Group $n = 3$.

^c Control Group $n = 33$; Intervention Group $n = 28$.

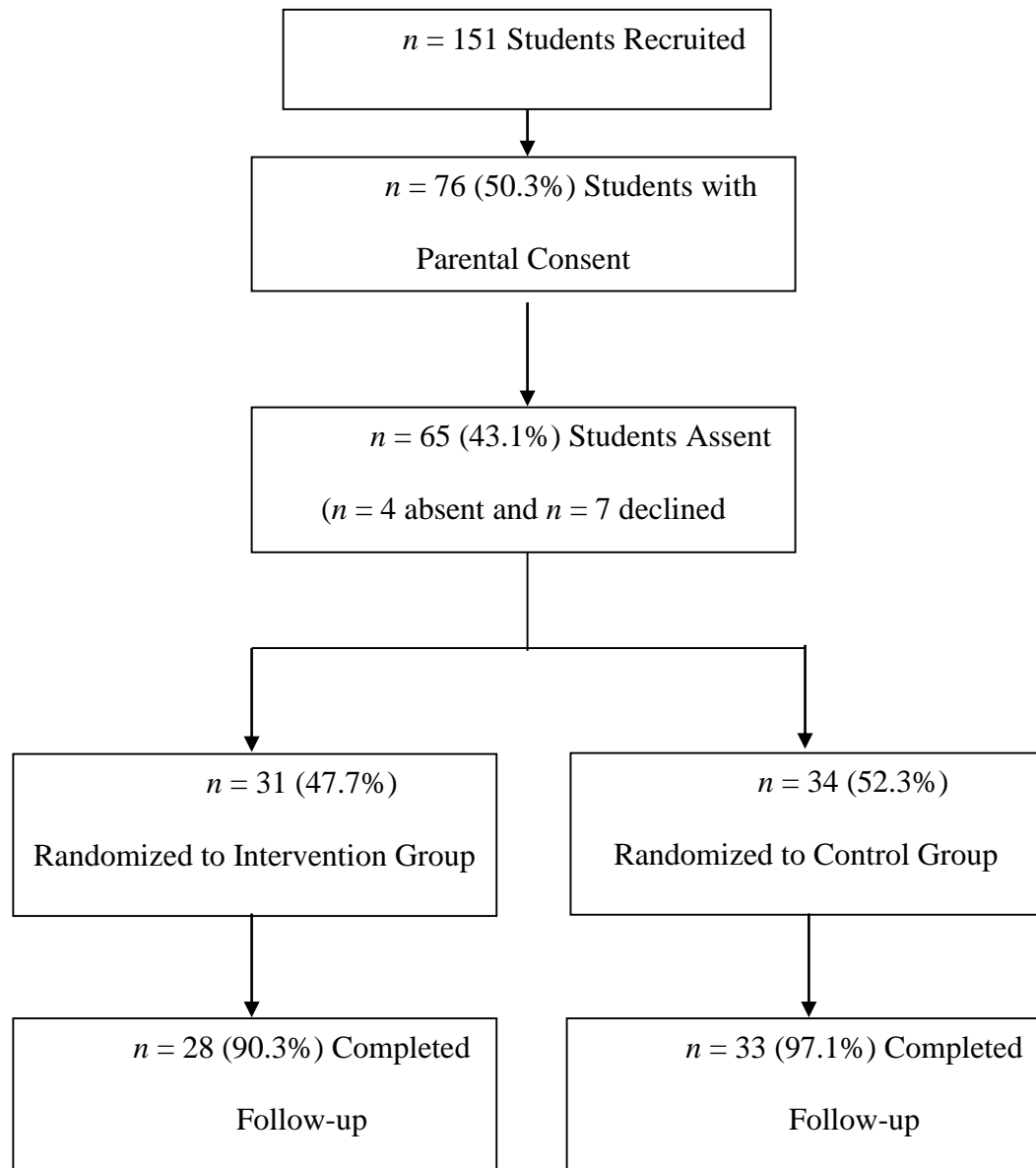


Figure 4.1 Participant Flow Diagram

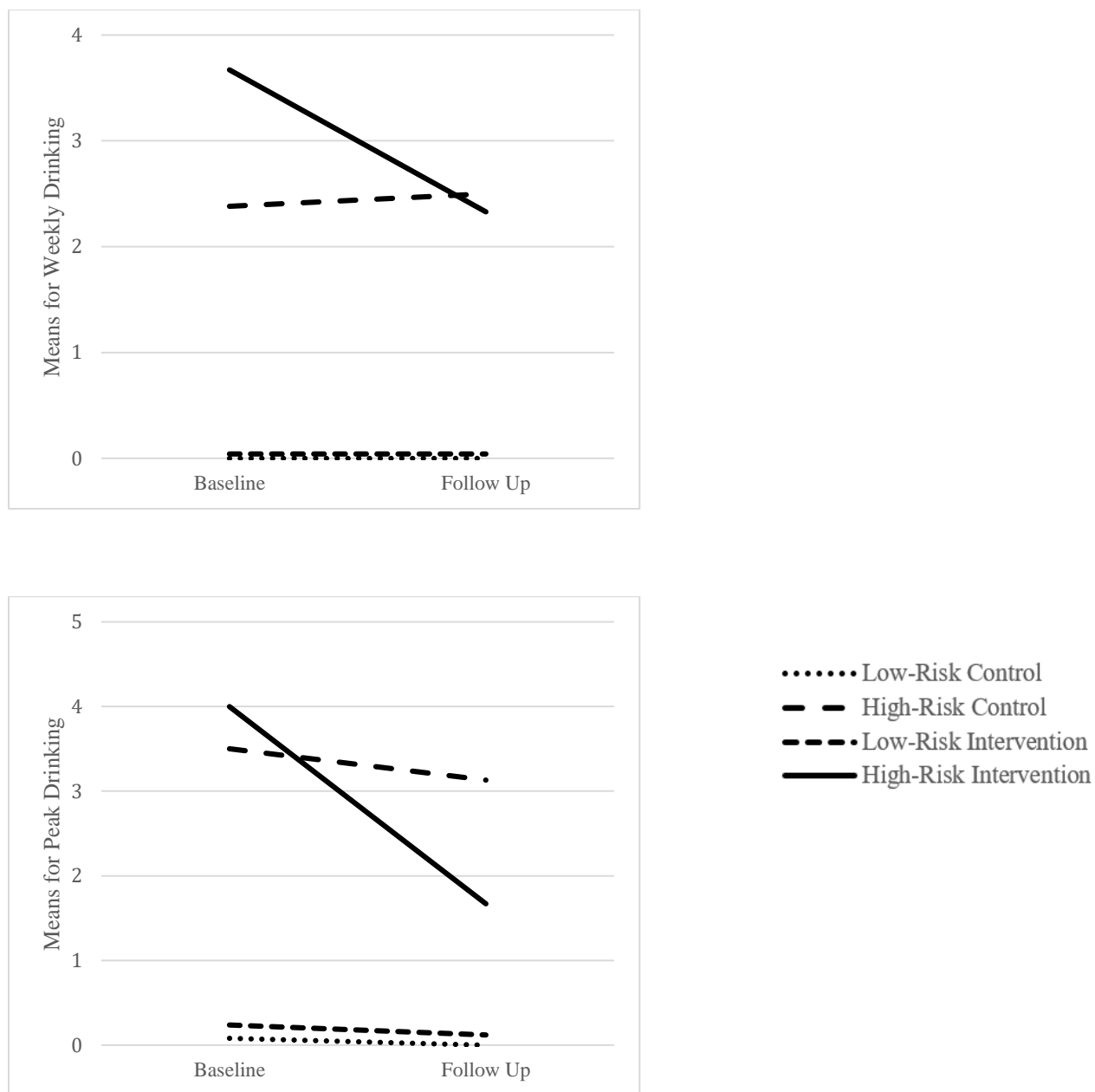


Figure 4.2 Charts with Frequency Statistics for Weekly Drinking and Peak Drinking at Baseline and 30-Day Follow Up

CHAPTER FIVE

5.1 Summary

Underage substance use is most prevalent among high school students and bullying continues to be a major issue within this age group. Additionally, involvement in bullying whether as a bystander or target of bullying is associated with increased substance use. Thus, it is important to utilize bullying interventions that are effective for this age group and, ideally, reduce negative consequences of bullying, such as the use of substances. Thus, the purpose of this body of work was to address the relationship between witnessing bullying and alcohol use through the implementation of the “aged-up” STAC program for high school students.

Chapter Two calls attention to and introduces the relationship between bullying and substance use among high school students by examining gender differences in this relationship among targets of bullying. Results indicated students who reported bullying victimization reported higher levels of alcohol and illicit drug use, but not marijuana use. Further, the relationship between bullying victimization and illicit drug use was moderated by gender, such that males who reported bullying victimization reported the highest levels of illicit drug use.

Chapter Three is a mixed methods study assessing the appropriateness of an “aged-up” brief bullying bystander intervention (STAC) and exploring the lived experiences of high school students trained in the program. Quantitative results included an increase in students’ knowledge and confidence to intervene in bullying situations,

awareness of bullying, and use of the STAC strategies. Quantitative findings were supported by qualitative findings that students reporting feelings of empowerment in bullying situations and increases in awareness of bullying situations. Implications suggest that the “aged-up” intervention is a developmentally appropriate way to equip high school students with strategies to intervene in bullying situations when they witness bullying as bystanders. This study supports the use of STAC in the high school population, which provided an age-appropriate bullying bystander intervention for Chapter Four’s study.

Finally, Chapter Four’s study built upon the studies in Chapter Two and Three by examining the efficacy of a brief, bystander bullying intervention (STAC) on reducing alcohol use among high school students. At 30-day follow-up, students in the intervention group reported greater reductions in alcohol use compared to those in the control group and intervention effects were moderated by drinker risk-status such that effects sizes were larger for students classified as high-risk drinkers. This study’s findings supports the use of STAC in the high school setting to equip bystanders with strategies to intervene and to reduce alcohol use among high school students.

In conclusion, this collection of work presents a unique process of calling attention to and addressing the issues of bullying and substance use in adolescence. Findings from each article paves the path toward the next article, leading to the evaluation of the efficacy of a brief, bystander intervention program on reducing alcohol use. While not without limitations, this body of work provides a framework for delivering a brief, school-based interventions with dual purposes of bullying intervention and reducing high school student alcohol use.

APPENDIX A

“Aged-Up” STAC Scenarios

Scenario 1

In the PE locker room, you overhear some girls talking about another girl who is going through a break up. You hear them call her a “loser” (and some other hurtful names) and gossip about the reasons she and her boyfriend broke up. They also talk about how the girl is not skinny or pretty enough to date the guy.

Scenario 2

For a few weeks during break, you have noticed a group of students stand in the middle of the hallway and “shoulder check” another student as he tries to walk by to get to his next class on the other side of the school. Today, the student is tripped by one of the students standing with a group and something he was carrying was damaged.

Scenario 3

Your friends are hanging out at your house after school, looking through Twitter. One friend decided to follow a girl from school that they do not like, and then repost one of her posts making fun of her in a humiliating way. This is not the first time your friend has done something like this.

Scenario 4

You are in the parking lot and suddenly you hear yelling coming from a car that is trying to pull out of a parking spot. You see a guy yelling at his girlfriend that she can’t go to lunch with a certain friend because he saw the text messages they sent last night. You know this happens a lot with this guy, and you’ve been concerned for a while.